

# DEPARTMENT OF DEFENSE ACQUISITION POLICY

---

HEARING  
BEFORE THE  
SUBCOMMITTEE ON READINESS AND MANAGEMENT  
SUPPORT  
OF THE  
COMMITTEE ON ARMED SERVICES  
UNITED STATES SENATE  
ONE HUNDRED SEVENTH CONGRESS  
SECOND SESSION

---

FEBRUARY 27, 2002

---

Printed for the use of the Committee on Armed Services



U.S. GOVERNMENT PRINTING OFFICE

82-253 PDF

WASHINGTON : 2002

---

For sale by the Superintendent of Documents, U.S. Government Printing Office  
Internet: bookstore.gpo.gov Phone: toll free (866) 512-1800; DC area (202) 512-1800  
Fax: (202) 512-2250 Mail: Stop SSOP, Washington, DC 20402-0001

## COMMITTEE ON ARMED SERVICES

CARL LEVIN, Michigan, *Chairman*

EDWARD M. KENNEDY, Massachusetts	JOHN WARNER, Virginia
ROBERT C. BYRD, West Virginia	STROM THURMOND, South Carolina
JOSEPH I. LIEBERMAN, Connecticut	JOHN McCAIN, Arizona
MAX CLELAND, Georgia	BOB SMITH, New Hampshire
MARY L. LANDRIEU, Louisiana	JAMES M. INHOFE, Oklahoma
JACK REED, Rhode Island	RICK SANTORUM, Pennsylvania
DANIEL K. AKAKA, Hawaii	PAT ROBERTS, Kansas
BILL NELSON, Florida	WAYNE ALLARD, Colorado
E. BENJAMIN NELSON, Nebraska	TIM HUTCHINSON, Arkansas
JEAN CARNAHAN, Missouri	JEFF SESSIONS, Alabama
MARK DAYTON, Minnesota	SUSAN COLLINS, Maine
JEFF BINGAMAN, New Mexico	JIM BUNNING, Kentucky

DAVID S. LYLES, *Staff Director*

JUDY A. ANSLEY, *Republican Staff Director*

---

## SUBCOMMITTEE ON READINESS AND MANAGEMENT SUPPORT

DANIEL K. AKAKA, Hawaii, *Chairman*

ROBERT C. BYRD, West Virginia	JAMES M. INHOFE, Oklahoma
MAX CLELAND, Georgia	STROM THURMOND, South Carolina
MARY L. LANDRIEU, Louisiana	JOHN McCAIN, Arizona
E. BENJAMIN NELSON, Nebraska	RICK SANTORUM, Pennsylvania
MARK DAYTON, Minnesota	PAT ROBERTS, Kansas
JEFF BINGAMAN, New Mexico	JIM BUNNING, Kentucky

# CONTENTS

---

## CHRONOLOGICAL LIST OF WITNESSES

### DEPARTMENT OF DEFENSE ACQUISITION POLICY

FEBRUARY 27, 2002

	Page
Wynne, Hon. Michael W., Principal Deputy Under Secretary of Defense (Acquisition, Technology, and Logistics), Department of Defense; Accompanied by Deidre A. Lee, Director, Defense Procurement, DOD .....	2
Styles, Hon. Angela B., Administrator, Office of Federal Procurement Policy, Office of Management and Budget .....	9

(III)

## **DEPARTMENT OF DEFENSE ACQUISITION POLICY**

---

**WEDNESDAY, FEBRUARY 27, 2002**

U.S. SENATE,  
SUBCOMMITTEE ON READINESS  
AND MANAGEMENT SUPPORT,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

The subcommittee met, pursuant to notice, at 10:15 a.m. in room SR-222, Russell Senate Office Building, Senator Daniel K. Akaka (chairman of the subcommittee) presiding.

Committee members present: Senators Akaka, Levin, E. Benjamin Nelson, and Inhofe.

Committee staff member present: David S. Lyles, staff director.

Majority staff members present: Kenneth M. Crosswait, professional staff member; Creighton Greene, professional staff member; and Peter K. Levine, general counsel.

Minority staff members present: Brian R. Green, professional staff member; William C. Greenwalt, professional staff member; and Thomas L. MacKenzie, professional staff member.

Staff assistants present: Dara R. Alpert and Daniel K. Goldsmith.

Committee members' assistants present: Davelyn Noelani Kalipi, assistant to Senator Akaka; Brady King, assistant to Senator Dayton; and John A. Bonsell, assistant to Senator Inhofe.

### **OPENING STATEMENT OF SENATOR DANIEL K. AKAKA, CHAIRMAN**

Senator AKAKA. The hearing will come to order. I want to welcome our guests this morning and thank them very much for being here as our witnesses.

The Subcommittee on Readiness and Management Support meets this morning to discuss acquisition policy and its issues affecting the Department of Defense (DOD). Over the last decade, Congress has worked closely with the Department of Defense to streamline our acquisition system and make it more responsive to the requirements of today's commercial environment. We have made some headway there. As a result, the Department of Defense is able to access rapidly advancing commercial technology products and services with a speed that we could not have hoped to achieve as recently as 10 years ago.

We have reason to be proud of these achievements, but at the same time we are faced with new challenges. Over the last several years, we have identified significant shortcomings in the Depart-

ment's management of its \$53 billion in services contracts. The General Accounting Office (GAO) and the DOD Inspector General have also identified systemic problems in the Department's contracting for information technology and in the pricing of sole source contracts. Finally, the new administration has concluded that the acquisition cycle is simply too long and must be shortened.

We need to work together to address all of these problems. At the same time, we need to learn some of the lessons of the past and avoid the kind of procurement abuses, like the spare parts scandals that plagued the Department in the 1980s, that accompanied previous rapid increases in the defense budget.

The key to achieving all of these objectives is the acquisition work force, the core of professionals upon whom we rely to make decisions every day that affect how hundreds of millions of Federal dollars are spent. Over the last decade, the acquisition work force has been drastically downsized, from 460,000 in fiscal year 1990 to 230,000 in fiscal year 1999. This downsizing has also resulted in the dramatic aging of the acquisition work force, which means that we can expect to lose many of our most experienced personnel over the next few years with fewer and fewer professionals available to replace them. This is an issue that merits our close attention.

I look forward to hearing from our witnesses on these important issues. We have excellent statements from each of the witnesses testifying this morning, and I want to express the subcommittee's appreciation for their work. We also have received statements for the record submitted by the GAO and the military services. Those statements will also be inserted in our hearing record.

Thank you. At this point, I want to show appreciation to our staff here for their efforts in what they have done to prepare this hearing.

I would then like to call on Secretary Michael Wynne for his testimony.

**STATEMENT OF HON. MICHAEL W. WYNNE, PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE (ACQUISITION, TECHNOLOGY, AND LOGISTICS), DEPARTMENT OF DEFENSE; ACCOMPANIED BY DEIDRE A. LEE, DIRECTOR, DEFENSE PROCUREMENT, DOD**

Mr. WYNNE. Senator, it is great to see you again, and I appreciate the opportunity to appear before the subcommittee. Senator Akaka, I was extremely pleased to hear you speak in defense of the acquisition work force, as we have in the audience some senior members of that work force. With your permission, I would like to introduce them *en masse*. They are the members of the class of the Executive Contracting Class No. 301, which is taught on behalf of the Defense Acquisition University by the Navy. With your permission, I will have them all stand up and be recognized.

Senator AKAKA. Please do.

Mr. WYNNE. I do not want you to think I packed the audience here, but it is a real opportunity for them to see in action, from your level and ours, how this thing works.

Senator AKAKA. On behalf of myself, the subcommittee, and the Senate, let me thank you for your valuable service and all you have done for the country. I want you to know that part of my respon-

sibility has to do with the Federal work force, so I am glad to see you here. Hopefully, there are folks that will come after you that can do as well as you have done.

Mr. WYNNE. Thank you, Mr. Chairman, for that forbearance. I will now start my more formal but still impromptu remarks.

Senator AKAKA. Thank you.

Mr. WYNNE. Mr. Chairman and members of the subcommittee, thank you for inviting me here to talk to you about acquisition reform. I am pleased to discuss many of the initiatives under way in the Department as we move our focus from reform to excellence. The key to our progress has been a strong partnership with Congress, especially this committee. We are partners with Congress in this enterprise and we cannot succeed without your continuing vision and leadership.

The passage of temporary emergency procurement authority in this year's authorization act is a great example of that support, enabling us to immediately improve our response to the war on terrorism. The Department is moving from reform to excellence by focusing on key areas: changing the environment; reducing the cycle time, as you mentioned; improving processes, including greater use of competition; linking human resources to requirements; and monitoring progress with metrics.

These focus areas directly support the President's management agenda and support Secretary Rumsfeld's as well as Under Secretary Aldridge's goals to transform the military and the acquisition process. Transforming the military is about more than building new high tech weapons. It is about transforming the Department that serves them.

A major objective for DOD is to change our environment to conduct government on a more business-like basis. To accomplish this, we have streamlined the Defense Acquisition Board to include the service secretaries. We created the Business Initiative Council to improve business operations of the Department. This council, consisting of the service secretaries, the Vice Chairman of the Joint Chiefs of Staff, and chaired by the Under Secretary for Acquisition, Technology, and Logistics, is working to make changes in business processes that will either achieve savings or at least avoid costs as the future rolls on.

We are implementing policies to reduce cycle time to get capability to our warfighter faster. By using evolutionary acquisition and spiral development, we will produce and deploy systems based on mature technologies. The first increment of capability will meet many, but not all, of the system's desired operational requirements. Subsequent blocks will incorporate new technologies that have matured as each block of capability is fielded. Global Hawk, used with great success in Afghanistan, is an initial capability of spiral development that will have increasing capability as technology improves.

Evolutionary acquisition and spiral development will enable us to maximize benefits from increased science and technology funding by providing available transformational technologies to the warfighter much faster. A perfect example of this is the broad agency announcement that we released in October that was open to the public for submission of ideas on combatting terrorism. It is an indication that the Department realizes that we might need in-

novative ideas from external sources as well as our own. We have received over 12,500 responses. Frankly, the expectation was in the hundreds, so we were overwhelmed.

While we are still evaluating many of these, a few have progressed to the proposal stage. Thus far, we have requested white papers from over 200 entries. These range, by the way, from U.S. large and small businesses to universities and entities in Canada, Hungary, and across the world. It was an amazing response.

We look forward to working with you in this exciting area of technology transition. We need to work jointly on a way ahead. Last year, our budget request of \$25 million for the quick reaction program was cut by Congress. This funding would have brought promising technologies rapidly forward, a feat that is very difficult in our 3-year planning and budgeting horizon.

One of the processes we are improving is the acquisition of services. We are working to establish a policy to ensure adequate oversight of the acquisition of services that will also be responsive to section 801 of the National Defense Authorization Act for Fiscal Year 2002. We established Department goals for the use of performance-based service acquisitions. To help achieve those goals, we issued a DOD guidebook with approximately 100 templates for performance-based service acquisitions. We are participating in an inter-agency working group to develop a government-wide guidebook.

We have web-based training available, and our Defense Acquisition University training courses have also been updated to address performance-based service acquisitions.

Finally, and most critically, is the area of managing and training our people. We are addressing the problems associated with the downsizing and aging of the acquisition, technology, and logistics work force. Approximately 50 percent of our work force is eligible to retire by 2005. Thus, this becomes a very key priority for us.

As a result, we have a number of initiatives ongoing, including: conducting human capital strategic planning; increasing participation in the acquisition workforce demonstration project, which is a broadbanding and a contribution-based compensation system; and developing a marketing, recruitment, hiring, and retention program.

The cornerstone of our efforts is the human capital strategic planning. We conducted a first round last year, will conduct a second round this year, and intend to institutionalize our human capital strategic planning process. We are managing our work force, including downsizing, and our human capital strategic planning process is the most critical tool needed to plan the future work force. Congressionally-mandated draconian cuts are not what we need just now as we face aging workforce retirements.

Workforce planning and training is essential to ensure that we have the right skill mix and capabilities to meet tomorrow's changing missions. Because we have an increasing training demand throughout the country, we are transforming the Defense Acquisition University to accelerate implementation of our acquisition initiatives by using restructured classroom training that utilizes case-based critical thinking exercises and more web-based training to extend our reach more efficiently and effectively.

Our redefined acquisition technology and logistics work force has resulted in a 30 percent increase in training requirements. Because the Defense Acquisition University is the vital link to ensuring that we have a trained and ready work force, I was surprised when Congress cut their funding at a time when our training requirements are in fact increasing. It is critical that we fund the Defense Acquisition University to ensure that we have consistent training needed to have a top performing acquisition, technology, and logistics work force. I appreciate your support for their vital mission.

We recognize we have more challenges ahead and are seeking your help. The Department is frequently hampered by a demanding set of statutory requirements, which restricts our flexibility, and thus, our ability to adapt to changing circumstances. I ask the subcommittee to support the President's freedom to manage initiatives so that we would be better able to efficiently and effectively execute the programs you entrust us with.

An example of this is our limited authority for reprogramming. Another is with respect to reports to Congress. We can appreciate Congress' oversight role and the need for information, but we believe reports should come with a sunset provision so that the value of a continuing report will be periodically reviewed and continued or cancelled.

An area we would like to work with you where we can see real benefit is in stabilizing funding for some of our acquisition programs. We would like to resurrect something similar to the 1980s milestone authorization language. Congress would authorize funding allocations consistent with program milestones, which would allow programs to have more funding stability, and thus benefit from lower costs due to the extended planning, reduced administrative burden, and substantial continuity of performance.

To accomplish this, milestone-to-milestone budgeting would be established on selected programs in agreement with Congress. This means the program managers and acquisition executives would establish long-term budgets to cover work between systems development, demonstration, and commitment to production based on the program baselines. In order for this to work, the Department and Congress must both commit at all levels to protect these budgets, provided that the program is meeting its goals.

Another proposal that we have been working on is a government and DOD industry assignment program. Government and industry can learn much from each other, but clearly the private sector, particularly commercial industry, is the place to learn about worldwide best practices and business process expertise. Tapping into this expertise would be very valuable to the Department as we continue to transform.

While the Department has a few programs to send outstanding DOD personnel to industry, we do not have a program to bring industry into the DOD so that they may have an appreciation for the problems that we face. Currently, an industry person would have to sever his ties with his company in order to accept any DOD assignment, which is simply not going to happen. We would ensure that there would be no conflict of interest in these assignments. We will continue to work with other agencies to address their concerns



related to conflict of interest or ethics, but your support would be very beneficial to encourage this exchange.

In closing, I want to express how honored I am to work with the hardworking, patriotic, and dedicated members of the Department of Defense. The Department's response to the events of September 11 is a tribute to the people in the Department, as well as a tribute to the dedicated members of Congress. I am truly proud to be a member of this administration's Department of Defense. I appreciate the support provided by Congress and look forward to working with this subcommittee, in particular, to realize our goals and best satisfy our security needs in the future.

I know this subcommittee has been both a leader and partner in many defense acquisition initiatives, and I appreciate your interest in continuing to improve defense management.

I want to introduce Ms. Deidre Lee, who has accompanied me here. She is prepared to take questions, as I am. Thank you very much.

[The prepared statement of Mr. Wynne follows:]

PREPARED STATEMENT BY HON. MICHAEL W. WYNNE

Mr. Chairman and members of the subcommittee, thank you for inviting me here today to talk with you about acquisition reform. We have many initiatives underway in the Department and our focus has moved from "reform" to "excellence." We are continuing on the path of acquisition excellence that Congress charted with the enactment of the Federal Acquisition Streamlining Act and the Federal Acquisition Reform Act. A key to our progress has been our strong partnership with Congress. We value the support we receive from Congress—most recently with the passage of temporary emergency procurement authority in the Fiscal Year 2002 National Defense Authorization Act—a great example of Congress enabling us to immediately improve our response to the war on terrorism.

The Department is moving from reform to excellence by focusing on changing the environment, reducing cycle time, improving processes including greater use of competition, linking human resources to requirements, and monitoring progress with metrics. These focus areas directly support the President's management agenda, which identified five Government-wide initiatives and support Secretary Rumsfeld's goal to transform the military. For example, consistent with the President's management agenda that identified strategic management of human capital as a goal, we are in the process of human capital strategic planning. Workforce planning and training is essential to ensure that we have the right skill mix and capabilities to meet tomorrow's changing missions. Because the Defense Acquisition University is the vital link to ensuring that we have a trained and highly qualified workforce, adequately funding DAU is critical, particularly given training requirements have increased by 30 percent and will grow with new people entering the workforce.

While changes are required to transform the way the military wages war, so to must our business processes be transformed. The military can better reach their full potential by making the business side equally as agile, lean, and focused. When Mr. Pete Aldridge, the Under Secretary for Acquisition, Technology, and Logistics, appeared before Congress during his confirmation hearing, he outlined five goals for the Department necessary to transform the business side of the Department of Defense. In my confirmation hearing, I stated my commitment to accomplish these goals. These goals are structured to provide a complete framework to move the Department from reform to excellence. We have numerous initiatives aligned to support attainment of these goals. We have already achieved successes to date. For example to:

- Achieve credibility and effectiveness in the acquisition and logistic support process. We are reducing cycle times in weapons systems with the use of evolutionary acquisition/spiral development. We are committed to transitioning technology to our warfighters. Advanced Concept Technology Demonstrations (ACTDs) have clearly accelerated the technology transition;
- Revitalize the quality and morale of the DOD acquisition, technology, and logistics workforce. We are transforming the Defense Acquisition University by moving from purely classroom training to more web-based learning mod-

ules, by emphasizing critical thinking skills and case-based reasoning, and by moving from a training model to a performance support model for the University. We are on our second phase of human capital strategic planning to assess mid and long term needs regarding the size, shape and skill mix of the 21st century workforce;

- Improve the health of the defense industrial base. We are looking at better ways to finance and incentivize contractors. We restored the rate of progress payments for large businesses to 80 percent. We are revising our profit policy to provide incentives for contractor cost efficiencies and investments in independent research and development, and to reduce incentives for contractors to “make” rather than “buy.” We are also encouraging the use of performance-based payments as a better way to link financing payments to performance;
- Rationalize the weapon systems and infrastructure with the defense strategy. With the help of Congress, we will have a new round of base closure and realignment in 2005. The Quadrennial Defense Review (QDR) and defense plans both provide information on shaping our future force structure using a capabilities-based approach. This strategy is still evolving as we learn from current operations in Afghanistan and better understand the impact of homeland defense on our organization; and
- Initiate high leverage technologies to create the warfighting capabilities of the future. We are aligning our S&T investments with desired capabilities as stated in the QDR, with increased emphasis on joint, transformational, and combating terrorism technologies. The fiscal year 2003 budget funds faster growth in science and technology with about \$1 billion over last year’s request. Our S&T investment is increasing year after year as the overall defense budget baseline increases and we are continuing to pursue our goal of 3 percent of the total obligation authority for S&T.

We recognize we have more challenges ahead, specifically, in implementing legislation regarding contracts for services, implementation of spiral development, and other techniques to shorten the weapon system development life-cycle and minimizing the impact of continued downsizing of the acquisition workforce.

First, because of the magnitude we spend on services, we are developing a strategic approach to acquiring them. We are establishing a policy to ensure adequate oversight of acquisition of services that is responsive to section 801 of the National Defense Authorization Act for Fiscal Year 2002. Pursuant to law, we established Department goals for the use of performance based service acquisitions. To help achieve these goals we issued a DOD guidebook and are participating in an inter-agency working group to develop a government-wide guidebook. These efforts to increase performance based contracting are being incorporated into our training courses. In February 2002, we issued guidance to ensure all contractors are given a fair opportunity to compete for multiples award contracts for services and are developing regulations to implement section 803. Increased competition on these procurements must be accomplished in an efficient and effective way.

Second, we are implementing policies to reduce systems acquisition cycle time by using evolutionary acquisition/spiral development. Spiral development allows us to get capability to our warfighters faster and at less cost by producing and deploying systems based on mature technologies. When deployed, the first increment of capability (or block) will meet many, but not all, of the system’s desired operational requirements. Subsequent blocks will incorporate new technologies that have matured as each block of capability is fielded. The series of blocks represent the “spirals” of increasing capability to the warfighter. Global Hawk, an unmanned aerial vehicle that has been the eyes for the soldiers in Afghanistan, will have increasing capability as technology becomes available. The Joint Strike Fighter is another good example, as its performance will increase as technology is matured.

We have numerous other process improvements underway, including: mandating the use of cost-as-an-independent variable for cost and performance trade-offs; requiring more realistic program cost estimating and ensuring jointness and interoperability; fostering technology transition; improving the health and competitiveness of defense industry by integrating business practices across functional lines in areas such as interoperability where integration is occurring across traditionally stove-piped functions of engineering, contracting, etc; creating coalition and international partnering through export control reform and globalization; working e-business to make it a reality; and reducing the logistics footprint. We recently established the Missile Defense Agency (MDA) to take advantage of a streamlined, tailored acquisition approach. We wanted to give the MDA the most visibility and prestige for collaborative efforts within the services. We emphasize this with the Senior

Executive Council, made up of the service secretaries and chaired by the Deputy Secretary of Defense, acting as the Board of Directors overseeing the MDA.

Third, we are addressing the problems associated with the downsizing and aging of the DOD-wide acquisition, technology, and logistics workforce. This is critical because we are faced with 50 percent of our workforce being eligible to retire by 2005. While we are sensitive to retaining and attracting people with the appropriate skills, this doesn't mean there are not pockets of overstaffing, as well as understaffing, within the Defense Department that are part of our planning efforts.

We first identified this problem to Congress in October 2000 with our Acquisition Workforce 2005 Task Force Final Report. There are a number of initiatives ongoing, including conducting human capital strategic planning; increasing participation in the acquisition workforce demonstration project; implementing a contribution-based compensation system with streamlined classification and hiring attributes; and developing a marketing, recruitment, hiring, and retention program. The cornerstone of our efforts is the human capital strategic planning and management. We conducted a first round of strategic planning last year, are doing a second round this year, and intend to institutionalize the process. The process provides a way to develop plans that tie human capital and mission outcomes together, build the business case for personnel requirements, and identify barriers and gaps for appropriate action.

We are also transforming the DAU and the course curriculum that will accelerate implementation of our acquisition initiatives through improved classroom training and increased web-based training. Placing additional emphasis on DAU is crucial to accelerating implementation of Department's initiatives. A redefined acquisition, technology, and logistics workforce has resulted in a 30 percent increase in training requirements. It is critical that we maintain funding for DAU to ensure training and education of the workforce as retirements increase. DAU is the model for many countries and agencies. For example, Australia is developing a similar university, and the Office of Federal Procurement Policy is encouraging civilian agencies to take advantage of DAU's offerings.

Transforming the military is about more than building new high tech weapons, it is about transforming not only our armed forces, but also the Department that serves them. A major objective for DOD is to change our environment to conduct government more business-like. To accomplish this, we have streamlined the Defense Acquisition Board to include the service secretaries. This eliminated layers of oversight by involving the secretaries directly. Additionally, we created the Business Initiative Council to improve business operations of the Department. This council, consisting of the service secretaries, the Vice Chairman of the Joint Chiefs of Staff, and chaired by the Under Secretary for Acquisition, Technology, and Logistics, works collaboratively to make changes in business processes that save money. Preparing for the future will require us to think differently, and therefore, act differently.

We will continue to look for ways to improve our processes. In December, we released a Broad Agency Announcement that was open to the public for submission of ideas on combating terrorism. We purposely kept this unclassified because our industrial base is extremely talented and we wanted to attract the best ideas available throughout the entire industry. The Department received over 12,500 responses, and while we are still evaluating many of these ideas, a few have progressed to the proposal stage. An area where we can use your help is in transitioning some of these great ideas and other technologies to the warfighter. Last year, Congress cut \$25 million that was budgeted for the Quick Reaction Program. This program would have brought promising technologies rapidly forward. We need to work together to develop an approach that includes funding and an understanding of "faith in funding"—the recognition that not all technologies will, nor should they, be transitioned to acquisition. ACTD programs are a great example, but we need to do more to structure a way forward in technology transition.

Another area where we could use help from Congress is in streamlining reports to Congress. We can appreciate Congress' Constitutional oversight role and the need for information, but we believe reports should come with a sunset provision so that the value of continuing a report will be periodically assessed. I look forward to working with you to identify other areas where we could use help.

In closing, I want to express how honored I am to work with the hardworking, patriotic, and dedicated members of the Department of Defense. The events of September 11 reaffirmed the importance of what we do. I appreciate the support provided by Congress and look forward to working with this committee to realize our goals and best satisfy our security needs in the future.

Thank you for the opportunity to provide this statement for the record.

Senator AKAKA. Thank you very much. We welcome Ms. Lee to the subcommittee's hearing.

Ms. LEE. Good to see you, sir.

Senator AKAKA. At this time I would like to call for testimony from the Honorable Angela Styles, Administrator of the Office of Federal Procurement Policy.

**STATEMENT OF HON. ANGELA B. STYLES, ADMINISTRATOR,  
OFFICE OF FEDERAL PROCUREMENT POLICY, OFFICE OF  
MANAGEMENT AND BUDGET**

Ms. STYLES. Thank you, Chairman Akaka. I appreciate your invitation to be here today, your interest in Federal procurement, and the opportunity to discuss these issues with you today.

In many respects, I think we have reached a crossroads. Working hand-in-hand with Congress over the past 10 years, the Federal procurement community has made significant and I believe much needed changes to the way the Federal Government buys goods and services. Our departments and agencies have been armed with a wide variety of contracting tools that allow for the purchase of much-needed goods and services in a fraction of the time it took a decade ago.

The value of these tools could not have been more evident than in the hours, days, and months following the September 11 terrorist attacks. The Department of Defense, and the Air Force in particular, proved without question that they had learned to effectively use the available contracting flexibilities to address urgent needs. Just as an example, the Pentagon renovation program had a contract in place for a major portion of reconstruction and recovery just 4 days after September 11 and contracts in place for the remainder on September 18.

At the same time, our ongoing fight against terrorism and the paramount duty of the Federal Government to secure the safety of the American people may present some new unforeseen challenges for our procurement system. In this regard, I was pleased to see that the temporary emergency procurement authorities that Congress provided the DOD were appropriately tailored to focus on activities most directly involved in fighting terrorism, while keeping our overall framework of competition intact.

By taking similar considerations into account, the Federal emergency procurement flexibility bills currently pending before Congress can provide appropriate authorities to all agencies in our united fight against terrorism, while ensuring effective investment of taxpayers' dollars in the long run. I look forward to continued productive discussion on these bills.

I must caution, however, that the tools of operational efficiency cannot be viewed in isolation. Good results require a balanced approach. Operational efficiency alone is not a formula for sound acquisition. Operational efficiency does not ensure value, quality, or cost effective performance. The basic building blocks for acquisition cannot be forgotten: sound planning, consistent use of competition, well-structured contracts, and solid contract management.

We must foster an environment that values competition, fairness, integrity, and transparency. Adherence to these values and the policies that promote them will garner the public's confidence and

help encourage robust participation in procurement by contractors both large and small.

Regrettably, we cannot remind ourselves enough of the need to follow these acquisition basics. Hardly a month seems to pass when Congress, the GAO, or agency inspectors general are not citing the lax application of these basic functions as a major contributor to shortfalls in program performance. Insufficient attention to requirements development, failure to perform vigorous price analysis, inconsistent use of competition, weak negotiations, and poorly structured contracts with ineffective incentives continue to plague even the most streamlined and protest-proof of our acquisition tools and may be putting taxpayer dollars at risk.

My concerns are particularly heightened when we discuss the use of multiple award task and delivery order contracts and use of the multiple award schedule program operated by the General Services Administration (GSA). Both of these tools involve indefinite quantity contracts that permit users to select suppliers and services from a range of prequalified contractors using streamlined source selection processes. These vehicles offer highly efficient access to the marketplace from an operational standpoint. However, some serious issues have arisen regarding the continued award of orders to preferred vendors. Despite regulations and explicit policy guidance, agencies have repeatedly failed to conduct even the minimal required competition.

For this reason, I applaud your desire to see the increased use of competition in the placement of orders and I understand the concerns that led to the enactment of section 803 of the National Defense Authorization Act for Fiscal Year 2002. You will note in my written testimony a recitation of the many steps we are taking to ensure the proper use of these contracting vehicles, including enhanced guidance in the Federal Acquisition Regulation (FAR), a review of Government-wide Acquisition Contracts (GWACs), and the creation of a web site on interagency contracting.

I remain, however, troubled that these steps may not be sufficient. I look forward to continued work with this subcommittee to ensure that we reach a proper balance between operational efficiency and competition, integrity, and transparency in the expenditure of taxpayer dollars for the use of these vehicles.

This concludes my prepared remarks and I am happy to answer any questions you may have.

[The prepared statement of Ms. Styles follows:]

PREPARED STATEMENT BY HON. ANGELA B. STYLES

Chairman Akaka, Senator Inhofe, and members of the subcommittee, I appreciate the opportunity to appear before you to discuss challenges facing the Federal procurement community and some of the administration's plans to address them. While my discussion will take a government-wide focus (consistent with the mission of the Office of Federal Procurement Policy (OFPP)), it is intended to take into careful consideration the activities of the Department of Defense.

As this subcommittee knows, the President has called upon agencies to become market-based and results-oriented, rather than process driven. If we take away just one message from the President's Management Agenda and his Fiscal Year 2003 Budget, it is that results are what matter in the end. To use the President's own words: "We are not here to mark time, but to make progress to achieve results, and to leave a record of excellence."

The President's message presents an important challenge—and opportunity—for agency procurement personnel. As the creators and guardians of the vehicles that

most directly influence how effective contractors will be in helping to carry out the business of government, procurement personnel play a critical role in a performance-based environment. This role becomes even more vital at a time when the demands of national security assert a heavy claim on our Nation's resources.

This morning, I would like to begin by describing for the subcommittee the general challenge facing the Federal procurement community, as I see it. Then, I would like to highlight some of the steps we are, or will be taking, so that procurement offices are effectively positioned to meet the President's goal to achieve results. Finally, I would like to comment briefly on a couple of procurement-related legislative initiatives.

#### MANAGING THE PROCUREMENT PROCESS

Thanks in significant part to Congress, our current procurement process provides agencies with a variety of contracting tools that can help them deliver many goods and services in far less time than it took just a decade ago. These tools include: purchase cards, the Multiple Award Schedules (MAS) contracts, multiple award task and delivery order contracts (which permit streamlined source selection processes for placing repetitive orders with pre-qualified contractors), and streamlined processes for conducting competitive negotiations for buys on the open market.

While the operational efficiency made possible by these tools is understandably attractive to program offices, our ability to achieve good overall results also requires that acquisition processes take a balanced approach among all of the basic building blocks of acquisition: sound planning, consistent use of competition, well structured contracts designed to produce cost-effective quality performance from contractors, and solid contract management. All of these activities must occur in an environment that fosters fairness, integrity, and transparency. Adherence to these values, and policies that promote them, will garner the public's confidence and help to encourage robust participation in Federal procurement by contractors small and large.

Regrettably, we cannot remind ourselves enough of the need to follow the acquisition basics. Hardly a month seems to pass where Congress, the General Accounting Office (GAO), or agency inspectors general aren't citing to lax application of these basic functions as a major contributor to shortfalls in program performance. Insufficient attention to requirements development, failure to perform vigorous price analyses, inconsistent use of competition, weak negotiations, and poorly structured contracts with ineffective incentives continue to plague even the most streamlined and protest proof of our acquisition tools and may be putting taxpayer dollars at risk.

To improve performance, agencies must recognize that acquisitions are the shared responsibility of a variety of disciplines, including program, technical, contracting, financial, logistics, and legal personnel. These disciplines must work together so the respective expertise that each offers is better integrated in agency decision making. In particular, program offices must be willing to commit sufficient attention to acquisition planning and contract management. They must understand that no amount of training on the part of procurement personnel and no degree of operational expediency afforded by contracting tools can serve as a substitute for these activities.

For their part, agency procurement officials must not allow pressures for expediency to divert attention away from the application of fundamental contracting principles that lie at the heart of any successful acquisition process, no matter the agency or the requirement. Far from the mechanical or administrative-laden label that some might like to assign to the contracting function, procurement personnel remain vital to ensuring the proper stewardship of the \$220 billion in goods and services the Federal Government buys each year. These people are the key component of our acquisition workforce and are looked upon to ensure sound application of the varied contracting tools now available.

For this reason, my office is taking steps—albeit first steps—to underscore the importance of acquisition basics. In doing so, it is my hope that the tools and concepts that have grown out of acquisition reform are used, or are refined as may be necessary, to consistently produce the good results that their architects promised. In light of the subcommittee's particular interest in service contracting and inter-agency acquisition, I would like to briefly discuss the steps we are taking in these areas in particular.

#### *Improving Use of Indefinite-Quantity Contracts and Inter-agency Contracting*

As this subcommittee has observed, there has been an increased use of inter-agency contracting by DOD and other agencies in recent years. Much of this activity is tied to greater agency use of multiple award task and delivery order contracts and expansion of the MAS Program operated by the General Services Administration (GSA). Both of these tools involve indefinite-quantity contracts that permit users to

select supplies and services from a range of pre-qualified contractors using streamlined source selection processes. These vehicles offer highly efficient access to the marketplace from an operational standpoint. But, as this subcommittee knows from two GAO reports that were conducted on its behalf within the last 2 years, DOD has been acquiring hundreds of millions of dollars in services without taking basic steps to ensure best value. These conclusions were generally echoed by the DOD Inspector General last fall, who found that more than 70 percent of task orders under multiple award task order contracts were awarded on a sole-source or directed-source basis, the vast majority of which were improperly supported. While these reports focused on DOD, the problem is government-wide.

As I recently told the House Armed Services Subcommittee on Military Procurement, I do not believe that tools of efficiency are doomed to failure. At the same time, their effectiveness hinges on proper use. To this end, we are currently pursuing the following initiatives:

a. Enhanced guidance in the Federal Acquisition Regulation on multiple award task and delivery order contracts. A soon-to-be final rule that OFPP developed with the FAR drafters will, among other things:

- draw greater attention to the acquisition planning requirements of the Clinger-Cohen Act and encourage more deliberation by agency acquisition planners before orders are placed;
- improve the structuring of orders by, among other things, reminding agencies that individual orders must clearly describe all services to be performed or supplies to be delivered so that the full cost or price for performance of the work can be established when the order is placed;
- strengthen the quality of competition (i.e., the “fair opportunity” consideration that small and large contract holders are given when they vie for orders) by facilitating better information exchange between agency customers and contract holders; and
- reinforce agency responsibility to document the basis for exceptions (including the rationale for any tradeoffs among cost or price and non-cost considerations in making the award decision).

Guidance will also appear in the DOD FAR Supplement (DFARS) to reinforce usage of the fair opportunity process for the acquisition of services over \$100,000. The DFARS coverage is part of the implementation of section 803 of the National Defense Authorization Act for Fiscal Year 2002.

b. Strengthened regulatory guidance for MAS contracts. Recognizing the critical role competition plays in improving the performance of our contractors, I applaud your desire to see increased use of competition in the placement of orders under MAS contracts and understand the concerns that led to enactment of section 803. In this regard, we are actively working with representatives of DOD toward the publication of a rule in the DFARS that will focus on significantly improving the application of competition in the purchase of services in excess of \$100,000 under MAS contracts.

The DFARS effort notwithstanding, more needs to be done to improve the acquisition of services by all MAS customers. For this reason, we are working closely with the regulatory drafters on more comprehensive changes to the FAR. A FAR rule is well under development to clarify the use of statements of work, reinforce pricing considerations, and ensure award decisions are documented. The rule will also address competition, but will not initially apply the provisions of section 803. This will provide us (including GSA as manager of the MAS Program) with an opportunity to evaluate the impact of the DFARS rule and its suitability for possible government-wide application.

c. Review of government-wide acquisition contracts. As the subcommittee is aware, the Clinger-Cohen Act authorizes the Office of Management and Budget (OMB) to designate one or more heads of executive agencies as executive agent for “government-wide acquisition contracts” for information technology (IT), known as “GWACs.” OMB authorizes executive agents to establish these contracts for use on a non-mandatory basis by agencies across government. Today, five agencies serve as executive agents to award and administer specified GWACs pursuant to designations that OMB granted at the end of the last administration. These executive agents are: (1) GSA, (2) the Department of Transportation, (3) the Department of Commerce, (4) the National Aeronautics and Space Administration (NASA), and (5) the National Institutes of Health (NIH). These agencies operate a total of 15 GWACs (9 are operated by GSA, 3 by NIH and one by each of the three other agencies).

I recently asked the executive agents to provide OMB with information regarding their management activities (e.g., practices used to ensure a clear understanding of

roles and responsibilities between customer agencies and executive agents, respectively; steps taken to address customer misapplications). I hope this information, along with data addressing customer activity (e.g., use of the fair opportunity process, order structuring, awards to small businesses) will help OMB to gain a better understanding of whether these vehicles are helping to facilitate sound acquisition practices in support of agency programs.

d. Creation of a web site on inter-agency contracting. Earlier this month, the FAR drafters published a proposed rule in the Federal Register that would require agencies who award contracts for inter-agency use (i.e., servicing agencies) to make basic information about their contacts accessible through a central web site that will serve as an online source of information on these vehicles. Admittedly, the need for this type of on-line resource is long overdue. In addition to the 15 GWACs that I mentioned a moment ago, there are many more so-called “multi-agency contracts.” These contracts are established by one agency for use by multiple (or perhaps all) government agencies to obtain supplies and services. Unlike GWACs, multi-agency contracts are not limited to IT. In addition, administrators of these vehicles are not designated by OMB. However, they must operate their contracts consistent with the Economy Act, which lays the foundation for inter-agency acquisitions.

Because of limitations in our Federal Procurement Data System (FPDS), we have been unable to easily identify the number of multi-agency contracts or the type of activity that is occurring under them. The web site is one step toward providing the type of insight that might help us to better ensure that these vehicles (and any others intended for use by multiple agencies) are established and operated in the best strategic interest of the taxpayer. As I see it, the potential benefit of an online resource is two-fold.

First, the web site should help customers during acquisition planning and market research to more easily identify whether there may be a suitable existing Federal contract that can satisfy their needs. For example, where a GWAC or multi-agency contract has a heavy small business presence, ordering through one of these vehicles may facilitate access to small business expertise.

I appreciate that there is already considerable information on the web, much of it provided by servicing agencies. The goal is not to duplicate vast amounts of information, nor to generate needless burden on the agencies. In fact, I should emphasize that the web site will not be an all-encompassing source for market research. It is just one data point to assist agency customers in deciding whether an existing contract or open market purchase is the more suitable option. Accordingly, the focus will be on helping to more quickly acquaint potential customers about possible options through organized and faster access to basic information about these vehicles.

Information will likely include: (a) a description of the contract scope by supply, service, or industrial classification code, (b) identification of agencies that may place orders, (c) a list of administrative fees, (d) applicable socio-economic information, and (e) points of contact for follow-up. Of particular importance, I hope the web site will become yet another mechanism that servicing agencies may use to reinforce for their customers the keys to effectively structuring, competing, and pricing orders. It should also familiarize customers with the management structures that servicing agencies have put in place to facilitate effective ordering.

Second, the web site should help senior agency managers to get a better picture of the number of inter-agency contracts that their agencies are operating. Of course, the web site will not be a substitute for the type of dedicated management oversight envisioned by section 801 of the National Defense Authorization Act for Fiscal Year 2002; but, it will help to support appropriate management review efforts—such as the conduct of a “spending analysis.”

Our office will be working with GSA, DOD, and other agencies to ensure the web site, which is presently under construction, is operational in time for the publication of a final rule after public comments have been considered. Over the longer term, we are transforming the FPDS from a data-collection system into a management information tool (to be known as the Federal Acquisition Management Information System). Our goal is to take better advantage of current technological capability to provide timely, relevant, and reliable information addressing all of our acquisition processes and contracting tools to support critical agency business decision-making on a much broader scale.

#### *Using Performance-Based Service Contracting (PBSC)*

In recent years, there has been much talk about PBSC—a tool for helping agencies to shape their contracts around desired mission-related outcomes as opposed to how work is performed. Interest in this concept is understandable. Who can oppose a concept that can foster the creativity and initiative of the private sector to help agencies achieve better acquisition solutions to meet their needs? Yet, I think most,



if not all, would agree that PBSC is underutilized. In part, I believe the problem centers on a lack of clarity within agencies regarding the definition of what constitutes a performance-based service contract.

To help energize and refocus our PBSC efforts, I am taking the following steps. First, I am forming an inter-agency group to resolve disagreements among the agencies regarding performance-based contracting requirements. I anticipate, as one output of this effort, improved guidance regarding the scope and nature of PBSC. There must be a common understanding of the definition upon which to build experience and track progress.

Second, I plan to support government-wide expansion of the PBSC pilot that Congress established for DOD last year. Under the current pilot, DOD may treat acquisitions for services of \$5 million or less as commercial items if the purchases are performance-based and certain other conditions are met. Expansion of this pilot to civilian agencies should help to incentivize greater use of PBSC. I am pleased that numerous agencies are already actively pursuing pilot programs to gain experience with the PBSC concept.

Clearly, there is work to be done. I hope these steps will help to improve understanding within our acquisition workforce that is needed to generate greater use of PBSC.

#### LEGISLATIVE CONSIDERATIONS

Mr. Chairman, in the letter of invitation for today's hearing, you sought the administration's views on potential legislative initiatives. To date, no substantive evidence has come to my attention that points to the need for broad-sweeping legislative changes.

At the same time, I appreciate that, in today's environment, it is especially important that we continually review our statutory and regulatory framework to ensure our taxpayer dollars are being spent wisely. In this regard, I would like to comment briefly on our war against terrorism and ongoing efforts to take effective advantage of the commercial marketplace.

##### *Fighting the War on Terrorism*

Like you, I have been listening carefully to hear if there are any significant contracting difficulties agencies have faced since September 11. I am pleased that, thus far, agencies generally have been able to take effective advantage of existing tools. For example, the Pentagon renovation program had a contract in place for a major portion of reconstruction and recovery, just 4 days after the September 11 attack, and contracts in place for the remainder of reconstruction and recovery by September 18. GSA reported that it successfully used existing contracting processes to acquire tens of thousands of items to support the New York and Pentagon relief efforts—with purchases ranging from protective suits and respirators to computers and vehicles. These efforts illustrate that, if we apply good contracting practices, the tools that already have been made available to us should enable us to obtain efficient, timely, and cost-effective quality performance from contractors.

At the same time, our ongoing fight against terrorism and the paramount duty of the Federal Government to secure the safety of the American people may present some new unforeseen challenges for our procurement system. In this regard, I was pleased to see that the temporary emergency procurement authorities that Congress provided to DOD were appropriately tailored to focus on activities most directly involved in fighting terrorism while keeping our overall framework of competition intact. By taking similar considerations into account, the Federal Emergency Procurement Flexibility bills currently pending before Congress can provide appropriate authorities to all agencies in our united fight against terrorism while ensuring effective investment of taxpayer dollars in the long run. I look forward to continued productive discussions on these bills.

##### *Buying Commercial Items and Using Commercial Practices*

Concern has been expressed within the procurement community that agencies are not doing enough to take advantage of the commercial marketplace and commercial practices. Some of those expressing this concern believe that better use of agency resources will result if statutory changes are made to expand the universe of what are currently recognized as commercial items and the contract types used to acquire them.

I agree that there is always room for improvement in our use of FAR Part 12, which creates a preference for the acquisition of commercial items and lays a foundation for taking advantage of customary commercial practices. At the same time, I am not currently convinced that statutory changes regarding the definition of com-

mercial item or authorized contract types are either necessary or appropriate. Let me elaborate;

Use of commercial items: As Administrator, I am committed to ensuring effective reliance on the products and services of the commercial marketplace. Government access to commercial technologies remains a successful formula for driving quality up and costs down.

Clearly, opportunities exist for improvement: For example, stating requirements in performance-based terms will expand the field of commercial offerors and solutions that can meet our needs—thus enhancing competition and opportunities for better prices.

In addition, certain government-unique barriers still limit our access to the marketplace, in part because we have failed to take full advantage of the access that Congress has provided. In particular, it has been more than 6 years since the enactment of the Clinger-Cohen Act; yet, little has been done to take advantage of the authority afforded us to eliminate barriers that limit buyers' access to commercial off-the-shelf items (COTS). Waiver of government-unique requirements whose continued application is not in the best interest of the government will free our workforce from constraints that unnecessarily may be thwarting their access to readily available products that effectively and efficiently can meet the government's requirements. Towards this end, the FAR regulatory councils will soon publish an advance notice of proposed rulemaking to begin the regulatory process for finally implementing this authority.

Broadening the definition of commercial item: While proponents of statutory change may suggest otherwise, the framework Congress gave us for buying commercial items is broad and accommodating. Among other things, the definition encompasses products that have been offered for sale to the general public but not yet sold; products that have been sold, but not in substantial quantities; products requiring modifications customary in the marketplace or minor modifications unique to the government; and services offered and sold competitively in substantial quantities in the commercial marketplace based on established catalog or market prices for specific tasks performed under standard commercial terms and conditions.

It is important to keep in mind that the definition, while broad, is bound for a reason. In my opinion, the current limits recognize that certain conditions must exist in order for agencies to make effective use of commercial practices and adequately ensure that resulting purchases are in the best interest of the government, in terms of price, performance, and other considerations. While we certainly cannot afford to avoid risk, we cannot afford to ignore it either.

Fundamentally, we can never escape the fact that the government is not a private entity, does not report to shareholders, and does not have a profit incentive. While the government can adopt "commercial-like" practices, it can never act as a commercial company.

Thus, before we seriously endeavor to augment an already broad framework—either by expanding the statutory definition or by statutorily endorsing use of labor-hour and time-and-materials contracts—we must challenge ourselves to demonstrate that the tools which would serve as a surrogate for the safeguards provided today will adequately protect the public fisc. For services, for example, this means, among other things, finding meaningful safeguards in circumstances where competition may be lacking and pricing does not have the benefit of having been shaped through substantial sales in the marketplace. It also means identifying safeguards for labor-hour and time-and-materials (flexibly priced) contracts where there is no positive profit incentive to the contractor for cost control or labor efficiency because payment is based upon reimbursement for time and effort expended (i.e., best efforts) rather than being tied to a completed and delivered product or service for which there is a contract specified firm-fixed price (i.e., tangible results).

In short, I hope those that advocate broadening the definition of commercial item or authorizing use of labor-hour and time-and-materials contracts accept my challenge to identify appropriate safeguards, so that our policies relating to the commercial marketplace, however amended, are effective and consistent with taxpayer interests.

#### CONCLUSION

In this era of accountable government, the expectations of our citizens will rest heavily on the shoulders of our procurement process and its ability to maximize the return on taxpayer investment. Meeting this challenge will take work. In my opinion, past reforms have yielded uneven results. Changes have enabled agencies to satisfy many of their needs more expeditiously. Unfortunately, these changes have

not, as of yet, been as effective in helping us meet other important goals—namely better prices and quality.

Program offices across government, from those that serve the needs of our war fighters to those that support the government's efforts to promote educational excellence for our students, must ultimately depend on our procurement personnel to draft and negotiate the sound contracts that form the underpinning for successful performance. Working together, we must get back to our tried and proven acquisition basics. Only in this way will we ensure that the resources entrusted to the Federal Government are well managed and wisely used.

I look forward to working with this subcommittee in making sure our procurement system is up to the important task of meeting the pressing needs of our Nation. This concludes my prepared remarks. I am happy to answer any questions you might have.

Senator AKAKA. Thank you very much for your statements. Before I begin with my questions, I want to thank Secretary Wynne again for having Class 301 attend this hearing. Presently, Senator Voinovich, myself, and others are crafting legislation that would develop this area for our workforce. Not only in your departments and sections, but in other places of the Federal Government, there will be huge retiring forces and we need to compensate for this, and we are working on it. So thank you very much for mentioning that.

Secretary Wynne, both Secretary Rumsfeld and Under Secretary Aldridge have indicated that they believe that there is a compelling need to streamline the acquisition process to reduce the fielding times for new weapons systems and capabilities. We know that you and others have started what is called a spiral development process and that this can help solve this problem.

Secretary Wynne, do you believe that DOD Directive 5000 adequately addresses spiral development, or is some kind of supplemental guidance needed to assist program managers in designing spiral acquisition strategies?

Mr. WYNNE. Spiral development, I think, is a real attempt to answer the compelling need to shorten up our acquisition cycles. It is a delicate balance between pushing technology risk and having sufficient technologies for the warfighter. It works a lot better on long cycle development programs, where I have categories of technology that are long cycle, short cycle, and shortest cycle. I can produce, for example, with regards to the Joint Strike Fighter, a safety of flight envelope that meets the test criteria for safety of flight. I can then progress to the communications standards and crew comfort that would allow a shorter cycle development. Finally, a shortest cycle development, which is the weapons systems and applications of sensors. In that way, the warfighter will get the benefit of the technology cycles, which we always worry about essentially speeding ahead of our weapons systems development.

For a shorter cycle acquisition, it really portends that the initial fielding would satisfy the needs, but not the wants, of our warfighters. It is a very delicate balance of protecting the requirements that the warfighter desires, while still meeting the wants or laying in the ground work for the wants on a later basis.

This has a characteristic similar to preplanned product improvements. What it really does, though, is focus the attention of the acquisition program managers on the technology cycles so that they do not embed a technology cycle too early in the development program.

As to the risk side, we try to address technology maturation along the way during the introduction to production and through the Defense Acquisition Board cycles. We believe we are adequately protecting against gaining too much technical risk in trade for a reduced cycle time. However, we find that during the Advanced Concept Technology Demonstrations (ACTDs) when we push technology, we can fit some things on a much shorter cycle, so long as we do not intend to lay it on the entire force. Putting things into the entire force does require a lot more planning and a lot more technology evolution.

Senator AKAKA. Some point to the testing process as an area that should be scrutinized in this effort to reduce cycle times. However, the increasing complexity and interaction of complex systems would tend to argue for achieving high confidence during testing that these systems will work as advertised.

Mr. Secretary, would you agree that the principle of “fly before you buy” applies to spirally developed systems, and that we cannot afford to short-circuit testing requirements?

Mr. WYNNE. Testing requirements, of course, are an operations, testing, and evaluation (OT&E) responsibility for operational tests. However, we do have developmental test and evaluation (DT&E) within the acquisition, technology, and logistics (AT&L) function and I can address that. Simulation has come so far that for many of the capabilities that we desire in our weapons systems and simulation capability can well replace the requirements for extensive tests.

Testing is not inexpensive, and as we get farther along in our maturity we find that many times simulation can essentially replace tests.

As to the requirement that we “fly before we buy,” before we deliver products to the warfighter we clearly want to make sure that they operate as advertised so we are not satisfied with total simulation. That is why we ensure adequate OT&E prior to testing by the Office of the Director, Operational Test and Evaluation, and I think they are doing a fine job in specifying with us the tests that are necessary prior to going to the warfighter.

In regards to the previous question, I think DOD Directive 5000 is very flexible and we have allowed that flexibility for creativity for our program managers. I think it fits very nicely. The requirement for a supplement? I do not think they need more instructions on how to do their job, but we are very consistent with how we want them to do their job and I think that is expressed.

Senator AKAKA. Would you, Mr. Secretary, recommend that the Department proceed with an acquisition program in the absence of a determination by the operational test agencies that a system is effective and suitable for combat?

Mr. WYNNE. What I will say here, especially since I have an example that the Predator was declared unsuitable following its fielding in Afghanistan, is that this was on the basis of operational issues that have since been resolved. Sometimes there are differences between test requirements and applications. When we can limit the application to a specific engagement strategy, I do not feel like it is necessary that we undergo extensive tests.

In fact, many times you can get better by doing iterative fielding and then testing. The reason is because the development cycle is in the hands of the user. The user's comments are often much more profound than the engineering comments. I think there are a variety of ways to do it, but I will say that before I would roll out something to the entirety of the Army, Navy, Air Force, or Marines. I think it would be appropriate to go through a full operational test and evaluation. But for many items that we are using currently in the engagement, a tailored approach is probably sufficient.

Senator AKAKA. Thank you for that.

The Nunn-McCurdy amendment of 1982 required the Department to notify Congress and begin a review of programs that experience significant cost growth. The Navy Area Program cancellation last year was the first time since the early 1990s that the Nunn-McCurdy rules have ever led to a program being cancelled. The press has indicated the Pentagon intends to use the Nunn-McCurdy rules more aggressively.

Mr. Secretary, is the Department planning to use the Nunn-McCurdy legislation more aggressively, and can we expect to see more program cancellations on this basis? Does the current reporting system provide you the information you need to reach these kinds of decisions?

Mr. WYNNE. As an aside, I saw Dave McCurdy at our American Institution of Aeronautics and Astronautics (AIAA) Defense Excellence Conference. He was pleased and surprised at the same time to finally see Nunn-McCurdy not just breached and moved on, but actually employed in assisting with the management, which is what they had intended.

But what Nunn-McCurdy requires is a certification by the Secretary of a number of things: number 1, whether the program is essential to national security; number 2, whether the new cost estimates are reasonable; number 3, whether the management structure is adequate to manage control unit costs; and number 4, whether there are alternatives to the program that will provide equal or greater military capability at less cost.

In the case of Navy Area Program, we could not certify that the management could bring that program home to the revised baseline. We further wondered and speculated on whether there was an analysis of alternatives. In conjunction with the new Missile Defense Agency leadership, we concluded that there were analyses of alternatives that had better technologies that were on the horizon. Therefore, it was a candidate for the Nunn-McCurdy application and Secretary Aldridge refused to certify.

On his refusal to certify, Nunn-McCurdy then requires that program funds be withheld and the program be appropriately terminated. That is the application and that is what we did. It sent, as you might imagine, a warning shot across the bow of a lot of programs. It is an application of the principle, "do not hit my kid, hit the kid next to him." It just scares them to death, and that is exactly what has happened.

I will tell you that in conjunction with the cancellation came a message that Secretary Aldridge is not willing to certify out-of-control programs. If you bring a program in that you cannot certify to its management, then there is going to be a real look into whether

it still meets the mission that it was supposed to do and whether its mission cannot be accomplished by anyone else.

Because we are off on a capabilities and effects-based acquisition program, it becomes somewhat critical that we actually have overlapping systems. The message to the acquisition community is that while we want aggressive program management, we also want to establish credibility with Congress that we can bring programs in, if we have a Nunn-McCurdy breach, on a revised baseline. That is the message.

Senator AKAKA. Thank you.

Mr. Secretary, in the mid-1990s the Space Based Infrared System, High Component (SBIRS-High) satellite program was chosen to be a lead program for acquisition streamlining. In 1996, the program manager for the SBIRS-High satellite program gave a briefing on how the program was implementing acquisition reform. The briefing discussed the Air Force's oversight goals for the program. These goals were: no independent readiness reviews; no computer software verification and validation; minimal independent engineering analysis; minimal Independent Integrated Product Teams (IIPs) role, such as safety, reliability, parts material, etc.; and no detailed design approval for verification.

The SBIRS-High program has experienced billions of dollars of cost growth and is 4 to 5 years behind its original schedule. As a result, the Department may cancel the entire program after spending \$1 billion.

Mr. Secretary, do you think that the decision to eliminate outside review, analysis, verification, validation, and approval has served the Department well in the case of the SBIRS-High program?

Mr. WYNNE. In the early 1990s they formed a process of management referred to as the Integrating Integrated Product Team, the overarching integrated product team (OIPT), to essentially bring assistance and support to program managers. While I was not in on the original decisionmaking for SBIRS-High, it beats in the heart of every program manager to avoid anybody consulting him or directing him in any other way. I was surprised that the message was so distinctive.

But the fact is that we do not condone that any more. With the OIPT process, we have independent reviews. SBIRS-High is coming in for an independent review. I will tell you that with the Space-Based Infrared System, we do not have a substitute for that military capability. Therefore, we are applying all sorts of management oversight techniques to assist them in bringing that program in. It has been assigned, I believe, to the Missile Defense Agency as they complete the research and development cycle, and we are providing further oversight and visibility within that structure.

Senator AKAKA. Mr. Secretary, how will you ensure that other DOD programs, which were part of the acquisition reform effort in the 1990s, are not experiencing similar as yet undetected problems?

Mr. WYNNE. That is very hard. I will tell you that, number one, you try to impose a management discipline through the IPT and overarching IPT process to inhibit those problems from getting too hard to manage.

Second, I would advise that through this process we believe that we have exerted a little bit more positive control within the management structure. As you mentioned, the Nunn-McCurdy breach that occurred on the Navy Area Program has put a shot across the bow of these kind of programs to straighten-up and fly-right, because the Secretary is very hot on maintaining credibility with Congress.

That does not mean that we are not going to have Nunn-McCurdy breaches or advisories from the GAO or the Inspector General (IG) the programs that could have been managed better. But we are trying to exert as much positive control as we can, and as I mentioned, Secretary Aldridge is fairly clear that he is not going to certify programs that cannot convince him of their ability to manage to the revised baseline that we supply as a Nunn-McCurdy requirement.

Senator AKAKA. Thank you.

At this time I would like to call on Senator Levin, the Chairman of the Senate Armed Services Committee, for any statement that he has to make.

Senator LEVIN. First, let me thank Senator Nelson. I asked him if he might yield to me for just a few minutes for questions, Mr. Chairman. He was gracious enough, as always, to do it, and I appreciate that.

I would ask that my statement be made part of the record.

Senator AKAKA. Without objection, it will be.

[The prepared statement of Senator Levin follows:]

PREPARED STATEMENT BY SENATOR CARL LEVIN

Senator Akaka, thank you for holding this important hearing. Senator Glenn used to say that acquisition policy is "the grunt work" of government. Oversight in this area is not always easy, but it is important that we do it.

Last year, we enacted some far reaching provisions that give the Department some of the tools it needs to manage its services contracts more wisely. These provisions should improve DOD's acquisition of services by:

- requiring the Department to establish, for the first time, a management structure, a program review structure, and a data collection system for services contracts;
- setting up a new mechanism to enforce competition requirements in services contracts; and
- establishing ambitious goals for savings from improved business practices, including performance-based services contracting and strategic management of services contracts.

Last year's bill also included a ground-breaking provision that would require Federal Prison Industries, for the first time, to compete for its contracts. Under this provision, DOD contracting officers, rather than FPI itself, will get to decide whether FPI products meet the Department's needs. If these DOD officials decide that FPI's products are not comparable to the best products available from the private sector in terms of price, quality, and time of delivery, they are required to purchase the product on a competitive basis. FPI would, of course, be permitted to submit his own offer.

These provisions, when fully implemented, will result in substantial savings and higher quality products and services—a victory for the Department of Defense and the taxpayers. For this reasons, it is absolutely essential that they be fully implemented as quickly as possible.

I look forward to the testimony of our witnesses.

Senator LEVIN. Mr. Chairman, 2 years ago then-Under Secretary of Defense Gansler established an objective that 50 percent of the Department's service acquisitions, measured in both dollars and ac-

tions, are to be performance-based by the year 2005. I understand that Secretary Aldridge has subsequently endorsed this goal.

Ms. Styles, is there a similar government-wide goal?

Ms. STYLES. Last year, we set a 20 percent government-wide goal. However, it was set before I came into office, and once I got into office and started to look at the situation I realized that we had some problems at Office of Federal Procurement Policy (OFPP) with our definition of what a performance-based service contract is. Some people are confused when I say that because there is a definition in the statute and there is a definition in the Federal Acquisition Regulation. However, the definition in the Federal Acquisition Regulation has been interpreted differently by defense agencies, and what that meant to me was that, although we set a 20 percent goal, the goal is meaningless until we have a consistent definition among the agencies. So even if we said we were meeting a 20 percent goal set by OMB, it would not necessarily have meaning unless we all agreed what a performance-based service contract is.

What I have done is taken some steps to establish an inter-agency working group to come to agreement on the definition of performance-based service contracting, and then move forward with a best practices guide as well. In the interim, I realized that it was unrealistic to have a goal higher than 20 percent. We need to have goals that are realizable, and that we are ensured are being met as well before we start ratcheting up that goal. I think eventually we should meet a 50 percent goal, if not higher. But in the interim, I do not want to demoralize people or encourage them to identify something as a performance-based service contract that is not.

Senator LEVIN. When will the definition be agreed upon? What is your deadline?

Ms. STYLES. We have not set a deadline yet. We are just in the beginning stages of putting together our group, but I imagine it will be a pretty short time frame.

Senator LEVIN. Like a month?

Ms. STYLES. I would say 2 to 3 months, to be realistic.

Senator LEVIN. Last September, the DOD IG reported that only 28 percent of the Department's purchases of services were competitive. The Inspector General recommended that the Department establish a goal of competing at least 75 percent of these orders. Secretary Wynne and Ms. Styles, when will you be implementing the requirement in section 803 of last year's DOD bill to establish a management approval process for sole source purchases in excess of specified thresholds so that we can get to that competitive approach?

Ms. STYLES. I would expect within the next several weeks. We have taken significant steps at the CAAC and the DARC. We have a working draft right now, and I expect that it should be approved in the very near future.

Mr. WYNNE. We are working on the same, to implement that as soon as we can, and we have a working group established to do that.

Dee, would you like to comment on that?

Ms. LEE. We are on the same group.

Senator LEVIN. Thank you.



I have just one additional question. Last year, our bill contained a provision, section 811, which ended the Federal Prison Industries mandatory source status on Department of Defense contracts and gave the Department the authority to purchase from the private sector on a competitive basis. It was a surprise to many of our colleagues that we did not allow the private sector to bid on government contracts. We ended that absurdity after a lengthy debate in the Senate and it was adopted as part of the final bill.

This provision became effective on October 1, 2001. Ms. Styles and Ms. Lee, when will we get final regulations implementing section 811, and in the interim, are Department of Defense contracting officers being forced to purchase products from the Federal Prison Industries on a sole source basis, not allowing private contractors to bid, even though the law says that they do not have to? Two-part question. Ms. Styles?

Ms. STYLES. The Department of Defense submitted their proposed rule to OIRA earlier this week. That begins the 90-day OIRA clock. During that time period, OIRA is soliciting comments from the departments and agencies. It would be implemented as an interim rule, so they are looking at it cautiously, but I would anticipate that before the end of that 90 days that the rule will be published.

Senator LEVIN. Ms. Lee, do you have anything to add to that?

Ms. LEE. That is the correct status, sir. Individuals would have to come forward with a waiver should they have something.

Senator LEVIN. In the interim, until that rule is adopted, are people in the Department being forced to buy from Federal Prison Industries, even though the law says the private sector should be allowed to bid?

Ms. STYLES. That is an operational question, I believe.

Ms. LEE. The current regulation as it stands instructs people to first go to Federal Prison Industries and buy specific products or get a waiver.

Senator LEVIN. The law supersedes the regulation, and we would urge you to abide by the law effective October 1, 2001.

Secretary Wynne?

Mr. WYNNE. Right. I would tell you, Senator Levin, that we are being very quick to respond to a waiver request. In the absence of the rule, that is the only process that we have available to us. However, the revised statute is made well aware to our contracting community, and so the concept of being forced to buy from Federal Prison Industries is not the issue. I think it is that we are simply waiting for the rule to be promulgated, but the contracting community is well aware and we are prepared to process waivers.

Senator LEVIN. I would think that the waivers should be the rule until there is an interim rule. In other words, the law says they should be allowed to bid, so that supersedes any previously existing regulation. I would suggest that waivers be automatic until somehow or other there is a regulation which adopts some process. But we have a law, it is clear, and I just do not want to see it evaded in any way, either through delay or through misinterpretation.

Mr. WYNNE. I would tell you, Senator, we put flank speed on when the law was delivered to us and I know that our colleagues at the Office of Management and Budget did the same thing.

Senator LEVIN. We thank you. I know that the Department supported this effort.

Again, Senator Nelson, let me thank you for yielding.

Senator AKAKA. Senator Ben Nelson.

Senator BEN NELSON. Thank you, Chairman Levin and Chairman Akaka.

I would like to thank the panelists for being here today. I certainly think it is enlightening to have a better idea of what is happening in terms of acquisition process and assets. Obviously, a management improvement plan to try to pursue more competition and to deal with the percentage requirements of statutes is extremely important.

What I would like to do, having just gotten back from Afghanistan, Pakistan, and Uzbekistan this weekend, is say that our troops are working hard. I feel that they respect the assets and support they have in terms of equipment, some of it new, some of it old, and some of it retrofitted. I did not hear any criticism of inadequacy in terms of what they have been given to fight with. I think that is an important statement to make.

As we look at the budget that has been submitted and the request for additional funds, much of the purchasing that is contemplated in that budget would be for what I would call transformational type assets or transformational type programs. I am concerned about the amount I see in that budget for old items from the last war and the previous last war.

Does the process that you have, in looking at acquisitions, raise sufficient questions about whether we need all of the old assets that are being required as part of this budget? Every news story has a different opinion about where we should be putting the money. I have my own view. I just do not happen to be in the news media.

But as I look at it, I am concerned. Anything that we spend on old assets, which might require retrofitting at the very least in the future and that do not seem to be in line with the type of war that we are fighting today and most likely the type of war we are fighting tomorrow, is siphoning away resources. No matter how large the request, the resources to fulfil those requests are limited.

As we look at the large budget, my question to you is, do we have in place a procedure or process that would permit the evaluation of the type, quality, and necessity of the assets that are being requested as part of the budget that has been submitted? For any or all of you.

Secretary Wynne.

Mr. WYNNE. Senator, first of all, I would like to thank you for the compliment to our soldiers in the field and for noting that they are being adequately resourced. I think it is an imperative to make sure that we have provided them the wherewithal to engage and defeat whatever enemy.

Senator BEN NELSON. I might suggest an upgrade in the tent that I slept in while I was over there. [Laughter.]

Mr. WYNNE. That is getting to facilities.

Senator BEN NELSON. Yes.

Mr. WYNNE. But it is the purview of the Chairman of the Joint Chiefs to certify war-worthiness and I probably would be entering

his area. I know there is a Joint Requirements Oversight Council (JROC) through which all program developments, even major modifications.

I myself am a pretty big bug, if you will, on interoperability. I believe, and the studies show, that during the inter-war period, less than 10 percent of the forces of Japan and Germany were actually transformal. The Germans when they attacked actually still had horse-drawn artillery.

There is great anecdotal evidence of a guy on horseback calling down a Joint Direct Attack Munition (JDAM) from a B-52 and closing the engagement with an 1825 cavalry charge, which some would say means we ought to get some horses. But the fact is that this shows the utility, if you have interoperability, of the systems in the field.

We have asked the Secretary of Defense to review legacy systems that are not interoperable and make sure they become interoperable by 2008 or be examined for elimination. That is going to bring some hard decision points forward.

Senator BEN NELSON. Excuse me. What time frame would that be? Would that be before we have to finally decide on this budget?

Mr. WYNNE. We set a deadline of 2008 because right now we have a tremendous number of systems that are coming forward for interoperability enhancements. My charge to that is, do we want to make those interoperable or do we want to let them lay fallow? So my answer to your question, I suspect, is that we really do not have a deadline set in the year 2002 that might assist you. I think you should probably engage the members of the Joint Chiefs of Staff on that subject and they can give you a better feeling for it.

Senator BEN NELSON. I am sure we will. Thank you.

Senator AKAKA. Thank you very much, Senator Nelson.

Mr. Secretary, the DOD has reduced its acquisition work force approximately 50 percent from the end of the fiscal year 1990 to the end of fiscal year 1999 while the workload has essentially remained constant, or even increased by some measures. In August 2000, then-Under Secretary of Defense for Acquisition, Technology, and Logistics, Dr. Jacques Gansler, wrote a memorandum stating: "I recommend that the DOD not have any further mandated acquisition work force reductions as a goal after fiscal year 2001. By any terms, the DOD acquisition work force has been drastically reduced while at the same time the number of DOD procurement and contracting actions has increased. We have gone as far as we can in mandating acquisition work force reductions without causing significant adverse impacts on the DOD acquisition system."

Mr. Secretary and Ms. Lee, do you share Dr. Gansler's view on this issue, and can you tell us what assumptions this year's DOD budget makes with regard to the size of the acquisition work force?

Mr. WYNNE. To my knowledge, we make no change in the acquisition work force other than human capital planning. We have staged the Defense Acquisition University budget at levels that were historic. We have given them an increased mission. We recently took the first step toward meaningful strategic human capital management. The components conducted the first cycle of our human capital strategies plan in August of 2001, and we transmitted guidance to the components for the second cycle of human cap-

ital strategy planning in January 2002 to determine the right number of people with the right skills needed to meet the challenge of this new century.

This information will be used to develop marketing, recruiting, hiring, and retention programs, because what we are faced with is the voluntaries. We do not want to be forced to take a draconian cut, because we will lose our skill base. We are concerned about losing that skill base in any event, which is why we are doing this human capital strategic planning.

So while I will tell you that there are always locations where you can trim that have maybe run out of a program, by and large we feel that right now we are at a risky part of our process and we would appreciate the support of this subcommittee in avoiding any mandated reductions this year or next, frankly. I think by 2005 we will have a much better handle on what happened to us.

Senator AKAKA. Ms. Lee, do you have anything to add?

Ms. LEE. I agree, we certainly are working a great deal with the Defense Acquisition University to try to make sure we have currency training and that the people we have feel like they are current and prepared with the new challenges that Ms. Styles mentioned. We are also working to make sure that we are ready when we begin to get new people in the work force, so that we can train them up quickly and then support them as they perform their jobs.

Senator AKAKA. Ms. Styles, as the administration continues to emphasize contracting out and competitive sourcing, the skills, training, and experience of the acquisition work force will be critical in effectively managing these contracts. In addition, the Federal Government will be faced with significant demographic challenges. As was mentioned, 50 percent of the acquisition work force will be eligible to retire in the next 5 years.

Ms. Styles, does our current acquisition work force have the quality and training to adapt to new acquisition reforms as well as to the increased workload and responsibility for managing privatization efforts?

Ms. STYLES. I think we always need to work on the training and the quality of our work force. Many have the current skills, but what I am looking for right now is a period of calm so we can make sure that the acquisition work force in place understands the flexibilities of the procurement system and knows how to use it. If we keep reforming and changing the system, no one is ever going to know how to effectively use it.

In my statement I cite to the Department of Defense's performance after September 11, which proved that they had spent time learning, training, and knowing how to use the tools of acquisition reform. That is not the case for many of the civilian agencies. One thing that September 11 brought out was the agencies that knew how to contract well and the agencies that did not, which somehow were asleep during acquisition reform. We have had to spend a lot of time with several civilian agencies to bring them up to speed, detailing people over there to make sure that they are able to meet the current needs to address the terrorism issues. We need to make sure that everyone knows how to work under the current system and not keep reforming and reforming it.

One point you made, however, I would like to clarify. We do not have a contracting out initiative. We have a competitive sourcing initiative. Our focus is not on contracting out employees. Our focus is on public-private competition. The reason for that focus is so we can ensure that the public sector employees that we have right now have the opportunity to compete for their job, but also are subject to the pressures of competition. Therefore, we can make sure that we are managing our agencies effectively and that we get the innovation and cost savings the private sector can bring to the table.

Senator AKAKA. Since you mentioned managing, what steps can we take to enhance the training and qualifications of our acquisition work force?

Ms. STYLES. Since I look at this from a government-wide perspective, I think one of the key things that we need to do is make sure that the qualifications standards for both the defense work force as well as the civilian agencies is equivalent. What we are finding right now is that people leave the Department of Defense and go to the civilian agencies, but they cannot come back. People from the civilian agencies cannot go back to the Department of Defense.

When we face more and more people leaving during this retirement wave, we need to be flexible. We need to have a procurement work force that can move around to defense departments and agencies. As a general proposition, we have one Federal Acquisition Regulation and you should generally know how to use those regulations and be rather easily able to move from agency to agency, whether it is a civilian agency or the Department of Defense. We really need to make sure that we work toward integrating defense and civilian agencies and their work force, including training as well as their requirements.

Senator AKAKA. Over the past 5 years there have been proposals to exempt Federal contractors from ceilings that limit the amounts that may be charged to the government for travel and relocation expenses. However, the proposals would continue to cap travel and relocation expenses for Federal employees. I opposed eliminating the reimbursement ceilings for contract employees in light of estimates by the Defense Contract Audit Agency that said the proposed regulations would cost the government \$130 million annually. This figure was supported by the 1999 GAO study that found that contractors who were allowed to bill reasonable business travel expenses cost the government significantly more than those who are held to per diem rates.

The question is, are there plans to revive these regulations? If so, is there no evidence that lifting the ceilings will save the American taxpayers money?

Ms. STYLES. We have both of those rules under consideration in the FAR Council right now. I certainly understand the concerns that contractors would somehow be treated differently than the Federal work force. I think if a contractor is staying at the Ritz-Carlton and the Federal employee is staying at the Holiday Inn, there are obvious equity concerns with that.

On the other hand, there are concerns from contractors, as well on the cost side, about the amount spent determining the reasonableness of the costs and what kind of system contractors have in place to determine the reasonableness of the costs as well.

These are under consideration right now. I anticipate that we would come out with something dealing with relocation, but nothing that would differentiate between the Federal work force and the contractors in an unfair way. The travel costs are, I think, on hold for a while, while we take into greater consideration what the increased costs on the budget side would be, as well as the policy issues.

Senator AKAKA. The Clinger-Cohen Act eliminated the requirement that every purchase of information technology (IT) go through the GSA, making it much easier for DOD and other agencies to purchase high technology products such as the latest computer and communications equipment. The underlying premise of the act was that agencies were better positioned to do their own capital planning and manage their own IT resources.

Unfortunately, it appears that in many cases the required planning is not taking place at all. Ms. Styles, do you think we have a problem here, and if so, what can we do about it?

Ms. STYLES. I think that is a problem. I think in many respects, and the IT area is a prime example, we have not focused on acquisition planning, acquisition basics, or doing what you have to do before you actually make the purchase. As a general proposition, a lot of the agencies are not well-versed in this.

You also have a disconnect, I think, between people who are buying these things and the people who need them. The procurement people often are not talking to the requirements people, who are not talking to the management people. In order for us to effectively function and procure things, be it IT or other systems, you have to get these groups of people communicating and working together better. I think the procurement people have often been left at the tail end of the process; all the decisions are made and then you toss it to the procurement people to go out and purchase it for you.

Our system cannot work effectively, unless we are promoting the participation of the procurement people very early in the process to provide their guidance and expertise.

Senator AKAKA. Two years ago, Congress enacted the Government Information Security Reform Act to provide a comprehensive framework for ensuring computer security throughout the Federal Government. This statute is scheduled to expire later this year.

Ms. Styles, are you familiar with the Government Information Security Reform Act and, if so, do you believe that it should be extended?

Ms. STYLES. I am not entirely familiar with it, so I am not going to present an administration view on its extension, although I can tell you from an acquisition perspective we just initiated a case on IT security to ensure that when we enter into a contract with a contractor that we have all of the security needs and requirements taken care of in the contract, because we do not have a specific contract clause dealing with that right now.

Senator AKAKA. Let me call on Senator Nelson.

Senator BEN NELSON. Thank you, Mr. Chairman.

Ms. Styles, I recognize the Ritz-Carlton and Holiday Inn issue. I recommend those tents and travel by C-17. It will reduce unnecessary travel, I can assure you.

Ms. Lee, as you are aware, Offutt Air Force Base, Nebraska is the home of the Fighting 55th Wing and Strategic Command (STRATCOM). The 55th has been asking for at least two more RC-135 Rivet Joint aircraft for several years. In fiscal year 2002, there was funding for new RC-135s as well as some new engines for the older aircraft that are in service. As a matter of fact, the RC-135s mission has proven to be invaluable because they were among the first aircraft sent over Afghanistan in Operation Enduring Freedom. The number of sorties that they have flown has continued to increase tremendously.

Can we find out the status of the new RC-135s, and is there a plan to replace them with something like the Boeing 767 airframe or some other manufacturer? Do we have a time frame? Sometimes the local folks ask me questions and I do not always have the answer, but I would like to try to find the answer.

Ms. LEE. Senator, I do not have the details. I would be happy to get them for you.

Senator BEN NELSON. If you would.

Mr. WYNNE. We would be happy to take that for the record.

[The information referred to follows:]

Mr. WYNNE. Funds were provided in the second 15-day release of the Defense Emergency Response Fund for conversion of two existing C-135B aircraft to Rivet Joint (RJ) baseline seven configuration. House Appropriations Committee, Defense Subcommittee (HAC-D) included language in the classified annex to H.R. 107-298 requiring additional information prior to obligation of funds. Additional information was provided February 4, 2002.

The Air Force has released funds to build one RJ, bringing the fleet total to 17. Projected delivery date is first quarter of fiscal year 2005.

The Air Force's long-term vision for Rivet Joint includes possible migration to a Boeing 767 airframe under the multi-mission command and control aircraft (MC<sup>2</sup>A) program. Three possible variants for the MC<sup>2</sup>A include ground moving target indicator (GMTI), airborne moving target indicator (AMTI), and signals intelligence (SIGINT). SIGINT variant will probably be the last to be addressed in the 2020 timeframe.

Senator BEN NELSON. Thank you very much.

Senator AKAKA. Thank you very much, Senator Nelson.

I would like to call on my friend, Senator Inhofe, for any statement or any questions.

Senator INHOFE. First of all let me apologize, Mr. Chairman. We just swore in on the floor of the House of Representatives the Congressman that is taking my old House seat, so I had to be over there to participate in that or I would have been here during the entire course of the hearing. I have some comments, but would like to include my statement in the record.

[The prepared statement of Senator Inhofe follows:]

PREPARED STATEMENT BY SENATOR JAMES M. INHOFE

This morning, the Subcommittee on Readiness and Management Support meets to receive testimony on the status of the defense acquisition system. I want to thank Chairman Akaka for holding today's hearing.

Improving how the Department of Defense buys goods and services is critical to our national security. We need to ensure that the money spent on defense acquisition is spent wisely. In doing so, however, we have to avoid being penny-wise and pound-foolish. We want to maximize competition, but we don't want to be left with only one source of supply after "winner take all" competitions. We want to protect against fraud and abuse, but we don't want to make doing business with the government so onerous that some of our Nation's top businesses decline to bid on government contracts.

This hearing will address a full range of acquisition-related issues but will primarily focus on spiral development in weapon systems acquisition, the acquisition of services, and the state of the acquisition workforce.

This administration has embraced spiral development as a tool to reduce cycle time and get weapon systems into the field faster. While many have applauded that goal, there have been concerns raised that "spiral development" and "incremental acquisition" mean different things to different people in the Pentagon. This lack of clarity needs to be addressed if we are to reap the benefits from this new approach.

Services contracting is an emerging problem area that will increasingly require the Pentagon's attention. Over the last several years, the subcommittee has heard that DOD does not do a very good job of managing the almost \$60 billion a year in service contracts. As a result, Congress enacted section 801 of the National Defense Authorization Act for Fiscal Year 2002 to require more effective oversight over these contracts.

Another emerging issue area is the acquisition workforce. DOD's acquisition workforce is facing an impending crisis as half of the eligible workforce is eligible to retire in the next 5 years. DOD is going to have to successfully compete with the private sector for the talent to run the acquisition system. Now is the time to address any barriers there are in attracting this new workforce.

I look forward to hearing from our witnesses on DOD's efforts to address these challenges.

Having at one time chaired this subcommittee, I have developed over the years some real serious concerns about our readiness. I really think one of the observations I would have—well, before I say that, since Senator Nelson was a little bit colloquial, I will have to be the same. Ms. Lee, I particularly welcome you, being from Oklahoma. It is nice to have you here before this subcommittee.

One of the things that does concern me is the future of the public depots, the whole core area. When you have new systems, it seems now that we are getting into long-term maintenance contracts with the original manufacturers. I would like to know what you think about that and what we could do to develop a core capability that would actually reach the definition of core. There is a reason that we have to have that in the public depot system.

At one time it was not quite as important. When I was first elected, there were maybe 20 or 25 defense contractors. We have cut it down to three right now. So the danger of being held hostage at the wrong time is more severe than it was at one time.

Secretary Wynne, do you have any comments to make about the future of the public depots?

Mr. WYNNE. I believe we have a policy about retaining core competence within the depot structure that would meet, I think, the stricture of your comment. I would say that as technology moves on forward we are finding better and better ways of not reducing necessarily the ultimate need, but certainly the instant need for some of those as it applies to new technology systems.

This is causing a strain between the provision of the best systems to our warfighters and the needs of supporting the depots. So my thoughts are still on balance. I am very neutral to the depots. I think they are a useful and productive means of supporting our Armed Forces, but I recognize that the technology cycles are getting fairly fast, and that fast pace is allowing us to do more built-in tests, return okays, and reduce spares.

In fact, a major push of ours is reducing the total ownership cost, which is causing people to rethink the sparing policies in total.

Senator INHOFE. I would like to be able to talk to you from time to time on ideas that we have. I know several of the three remaining air logistics centers are looking into some real creative things,



getting a lot of public funding or a lot of private funding and forming partnerships. I think you are probably aware of that.

Mr. WYNNE. Yes, sir.

Senator INHOFE. In fact, the first trip that Secretary Roche made, when he was first sworn in, was out with me to go over those issues. I know there is an interest in that.

It has been reported that the DOD will soon report to Congress that the cost growth in weapons systems will be up by 15 percent. I do not know whether any of you have already looked at that and would be able to share with this subcommittee the reason for that additional cost?

Mr. WYNNE. No, sir, I have not. In a return to the previous question, I certainly endorse the public-private partnerships that have occurred. I think that is the wave of the future because it allows the depots to really infuse themselves with both management and technical capabilities they had a hard time getting before.

As to the 15 percent cost growth, sir, I am not familiar with that. I do know that we have effectively created a credibility in budgeting and asked that instead of having the program managers produce their own cost estimates, we have turned to the independent cost group out of the Cost Analysis and Improvement Group (CAIG) in the Department of Defense. That has caused some of the programs to increase in perceived cost. We consider that that was not an increase in real cost, it was an increase in the cost that was driven by how we estimate today.

One of the things that I would tell you is when we were faced with Navy Area Missile and we refused to certify to the Nunn-McCurdy breach this was a shot across the bow. A lot of these programs that have come marching in believing that the Secretary was going to sign off on that breach. I think it has caused a lot of rethinking out there as to how exactly to meet the new baselines that they proffer, and I think it has given the Secretary the right kind of message to send.

We want to be credible to you, sir, to this subcommittee, and to Congress in general.

Senator INHOFE. I appreciate that very much.

Let me ask Ms. Styles one question. Are you familiar with the legislation that was introduced by Senator Warner and Senator Thompson, S. 1780, to provide emergency contracting relief for agencies necessary to respond to terrorist chemical attacks?

Ms. STYLES. Very familiar.

Senator INHOFE. Do you know where it is bogged down now, and what is your feeling about the legislation?

Ms. STYLES. We are very supportive of the legislation. We would like to see it enacted as soon as possible. A lot of it only will be effective for the next 18 months and we think it would be essential to get it in place as soon as we can, particularly with regards to other transactions authority for the civilian agencies. It is a tool that the Department of Defense has to do research and development on but that the civilian agencies do not have.

We do not know where it is bogged down right now. There has been a hold on the legislation and we do not know where that is coming from.

Senator INHOFE. I see. That is a concern of mine.

Secretary Wynne, you used the term, "a shot across the bow." I think, as tragic as September 11 was, it was also a shot across the bow. You are seeing a change in attitude, a recognition by many people who did not perceive any threat to be out there. We have had a serious problem in our readiness during the years that I have been serving here in the Senate. If you just look at the change in attitude after the September 11 tragedy in terms of the concentration of what we are going to be doing to defend America, I think it has had a good effect on a lot of the young people that are serving.

I had occasion to be over at Landsuhl, Germany, and talk to all the injured people from Afghanistan. Without exception, each one of them said they want to get back to their unit and they said that they want to make a career out of the military.

One young lady on the U.S.S. *Stennis* that was in an refueling operation over there, really under combat conditions, got her leg caught in some kind of a cable and it dragged her over the aircraft carrier. If you have ever looked down off the edge of one of those things, it goes down about 70 feet, into choppy water. She crushed both of her lungs. I sat and talked to her in the hospital and she said she is just anxious to get back to her unit and she is going to make a career out of the United States Navy.

So as bad and as tragic as things are, some good and positive things will come from that.

MR. WYNNE. Thank you, sir, for that uplifting story. We are so proud of our people that are participating in this engagement, we are popping our buttons. They really are doing a magnificent job.

Senator AKAKA. Thank you, Senator Inhofe. This is my final question. The DOD Inspector General reviewed DOD's compliance with the Truth in Negotiations Act, which requires contractors to provide certified cost and pricing data to the government in sole source procurements of non-commercial products to ensure that the prices they charge for these products are fair and reasonable.

The IG found that contracting officials lacked valid exceptions from obtaining certified cost or pricing data and failed to obtain required data in 36 percent of the 145 contracting actions. In addition, price analysis documentation did not adequately support price reasonableness in 124, or 86 percent, of those 145 actions. Contracting officials did not challenge items characterized as commercial and they accepted prices based on contractors catalogues and price lists without analysis.

Ms. Styles and Ms. Lee, are you aware of the Inspector General's findings?

Ms. LEE. Yes, sir.

Ms. STYLES. Yes.

Senator AKAKA. Would you agree that we need to tighten up our contracting processes to ensure that we get the information we need and perform the analysis we need to ensure that the government gets good prices in sole source procurements?

Ms. STYLES. Absolutely. One key area that we may have left behind in acquisition reform is the need to make sure, if we are dealing with a cost reimbursement contract or we are looking at something that is non-commercial in nature, that we are getting the appropriate, reasonable price for a good. A lot of times the examina-

tion of that price has been left behind in negotiations or in audit or otherwise.

We really have to make sure, I think for the integrity of our procurement system, that we are getting value for our taxpayer dollar. I am concerned on several levels that we are not negotiating the best prices and we are not going back and reviewing to make sure that the taxpayer is protected in these instances.

Senator AKAKA. Ms. Lee?

Ms. LEE. I agree. We are certainly spending a lot of time with our folks in the field emphasizing the importance of pricing, whether that be in a sole source buy or even for commercial items. Sometimes we will have a sole source item and someone will say it is commercial, that is the price. We still emphasize to our folks that they do need to do price reasonableness and make sure that the taxpayer is getting value for the dollar spent. That certainly is an area of emphasis.

Mr. WYNNE. Senator, I certainly appreciate that instructive comment. I do not know if Senator Inhofe realized that in the audience is the Executive Contracting Class No. 301, and I hope they were taking notes on that particular question because that is very valuable instruction. Thank you, sir.

Senator AKAKA. I thank Secretary Wynne, Ms. Styles, Ms. Lee, and Class 301. I want to thank the three of you for your testimonies and your responses to our questions. They have been very helpful.

These are difficult issues and we have to work on it and do the best we can in resolving them. I think we will do that. I look forward to continuing to work with all of you.

If there are no further comments, thank you so much for coming and for all you have offered today.

Mr. WYNNE. Thank you, Mr. Chairman.

Senator AKAKA. The subcommittee adjourned.

[The prepared statements of Mr. Bolton, Mr. Young, and Dr. Sambur follow:]

PREPARED STATEMENT BY HON. CLAUDE M. BOLTON, JR.

#### INTRODUCTION

Mr. Chairman and distinguished members of the subcommittee, thank you for this opportunity to report to you on the state of acquisition reform within the United States Army. It is my privilege to represent the Army leadership, the military and civilian members of the Army acquisition workforce, and the soldiers who rely on us to provide them with world-class weapons and equipment so they can do their jobs at anytime, anywhere in the world. We strive for excellence in all areas that contribute directly to warfighting capability.

We thank members of this subcommittee for your strong support of the Army's transformation to the Objective Force. This is a time of tremendous change within the Army, and we are most grateful for your wisdom and guidance. With your help, we will remain the world's preeminent land warfighting force—persuasive in peace and invincible in war. Your continued advice and support are vital to our success.

#### ARMY TRANSFORMATION

In the last 2 years, the Army has made great progress toward realizing a transformed force that is more strategically responsive and dominant at every point on the spectrum of military operations. While our transformation was well underway, the attacks on our homeland of September 11, 2001, and the operations that followed provide new urgency to our work, and justify our earlier decisions to accelerate the Army's transformation to the Objective Force. We must ensure that our

warfighters have the capabilities they need to accomplish the Nation's military demands in this new and emerging global environment.

The Army has taken a holistic approach to transformation, implementing changes in warfighting doctrine, training, leader development, organization, materiel, and soldier systems—as well as business practices. The acquisition, logistics, and technology community is working simultaneously on the transformation's three inter-related vectors—Legacy, Interim, and Objective Force. We are developing concepts and technologies for the Future Combat Systems (FCS), our largest single investment in science and technology (S&T) and perhaps most significant in terms of achieving full spectrum Objective Force capabilities. To fill specific near-term gaps in our capabilities today, we are acquiring a family of Interim Armored Vehicles for the Interim Force. Through our Recapitalization Program, we are rebuilding and selectively upgrading 17 aging systems to enhance the warfighting capability of our current force, the Legacy Force. Recapitalization not only saves money, it ensures readiness for today's victories. In all that we do, our focus is the soldier, the ultimate system for decisive victories in land combat.

#### ACHIEVING ACQUISITION EXCELLENCE

The Army's transformation applies to what we do, as well as how we do it. We believe strongly that streamlined acquisition management enhances program results, especially when there are clear and irrefutable lines of authority and accountability throughout the materiel development and acquisition processes. We are putting this new structure in place. Following an analysis that was requested by Congress, the Army Chief of Staff approved a reorganization of acquisition program management. To eliminate duplication of efforts between major Army commands, all Program Executive Officers (PEO) now report directly to the Army Acquisition Executive (AAE). Further, Program/Project/Product Managers (PM) who are either overseen by PEOs or report directly to the AAE now manage all Army acquisition programs regardless of acquisition category. This action ensures that there is only one chain of authority for acquisition programs within the Army, and clearly identifies PMs as responsible and accountable for the life-cycle management of their assigned programs.

The Army is the first service to elevate supportability to a level of importance equal with cost, schedule, and performance. We recognize that the acquisition and sustainment communities must work together to reduce life-cycle costs. As part of the restructuring of the Army Secretariat and Army Staff for a more unified approach in policy planning and resource management, the Deputy Chief of Staff for Logistics now provides advice and assistance to the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) in all areas related to integrated logistics support. This will greatly help to facilitate the integration of logistics and system supportability into the weapon system development process. It will also allow for increased commonality, interoperability, and reliability of components to reduce total ownership costs for our fielded systems.

In another area of great importance to the Army, we are examining all ways to reduce cycle times. Because advances in technology occur so rapidly, we fully support a spiral development/evolutionary acquisition approach to identify and plan for block improvements. This approach not only allows us to field weapon systems with the latest technology, but it allows us to enhance and evolve capability over time. FCS will use the spiral development acquisition approach to provide for rapid insertion of technologies as soon as they are available. Blocking requirements documents will lower risk and help to ensure that the program is on time and on schedule.

The Army is also committed to transform our business practices. We are using performance-based acquisition methods to the maximum extent possible. Our aim is to meet, well in advance, the Office of the Secretary of Defense mandate that a minimum of 50 percent of service acquisition dollars be performance-based by 2005. We seek greater access to the commercial market with its increased competition, better prices, and new entrants/technologies. The introduction of commercial practices and components in our acquisition program not only saves us money, it supports and complements our S&T program so we can then afford the latest technologies for building or enhancing our weapon systems.

The health of the defense industrial base is key to the Army's ability to continue to provide innovative technology, technologically excellent systems, and equipment at favorable and competitive prices. In this area, the Army recognizes the importance of structuring business arrangements with industry to ensure successful results through contractual incentives. The Army produced an in-depth study on the effective use of contract incentives and co-sponsored development of a distance-learning course to educate the workforce. Our focus on incentives will provide our

contracting workforce with the skills and tools necessary to provide sound business practices that will motivate contractors to do the right thing.

#### EXCELLENCE IN THE WORKFORCE

The United States Army Acquisition Corps and the entire Army acquisition, logistics, and technology workforce are the most professional, well trained and educated, and devoted workforce ever in our history. They survived years of reductions and consolidations and are now poised to provide the full range of support that is required to meet the Army's transformation goals and develop the Army of the future. We are justifiably proud of their significant accomplishments, as well as their eagerness to meet future challenges.

To continually attract new personnel, the Army Acquisition Corps is developing programs to recruit members with both technical and business skills from college campuses, corporate America, and the small business community. Internally, we are developing multifunctional acquisition leaders and managers through programs like the Competitive Development Group (CDG), Regional Development & Assignment Program, and the Acquisition Career Experience (ACE) Mentor/Intern program. Army Commanders, PEOs, and other senior acquisition leaders have created a culture that encourages cross-functional training and experience as a key to professional growth and career progression.

In partnership with the Defense Acquisition University and the Naval Postgraduate School, we provide our workforce with access to advanced acquisition education and training. We also provide advanced business and training opportunities at several prestigious universities (University of Texas, Massachusetts Institute of Technology, Carnegie Mellon, Harvard, and others). To sharpen business skills, the Army has teamed with the University of Virginia's Darden Graduate School of Business Administration to train acquisition professionals to compete in the new business environment. Finally, through the Army Tuition Assistance Program we are providing our workforce with fully funded opportunities to complete their college or advanced education while remaining on the job and at home with their families.

Our acquisition professionals are at the front of the transformation march. That is why we are empowering them to continuously look for and adopt smarter ways of doing business. We are structuring an environment of innovation, where they are allowed to identify and manage risk, and make decisions rather than avoid them. If we are to continue to develop, procure, and deliver world-class products to our soldiers, a highly trained, well-educated, quality workforce is essential.

#### CONCLUSION

What it all comes down to—transforming the Army, acquisition and logistics excellence—is the importance of working hard and working together with our industry partners to transform our products and processes so we wisely use our defense resources to preserve and enhance our military capabilities today, while we build the future force. The world situation demands an Army that is strategically responsive and dominant at every point on the spectrum of military operations. We are working hard to ensure that America's soldiers continue to be the best trained, best led, and best equipped land force on earth.

---

PREPARED STATEMENT BY HON. JOHN J. YOUNG, JR.

Mr. Chairman, distinguished members of the subcommittee, thank you for this opportunity to discuss the acquisition process. I know that Deputy Secretary Wynne will provide a detailed statement covering a broad spectrum of acquisition goals and initiatives. This subcommittee and Congress have led the way in enabling changes in the defense acquisition process. I would like to highlight a few areas where the Department of the Navy is using the tools you have provided to further streamline and improve the way defense systems are developed and acquired.

I will start by telling you that the Navy and Marine Corps are uniquely positioned and configured to respond to the challenges our Nation faces. They are prepared to meet these challenges with Naval Expeditionary Forces steeped in a tradition of operating deployed; swiftly responding to threats to U.S. interests, often in areas where access may be restricted by friends, withheld by neutrals, or denied by adversaries. Naval Forces are capable of initiating and sustaining nearly unlimited combat operations by sea, land, and air without being limited by a lack of logistics or host nation support.

The capability of the Navy and Marine Corps has been well demonstrated during Operation Enduring Freedom. Forward-deployed aircraft carriers provided the tac-

tical strike capability needed in the Afghanistan campaign. The Marine Corps deployed over daunting distances to secure the airfield and conduct operations at Kandahar against terrorists. Even with these successes, the Department is looking at how to provide greater capability for the future. Through programs such as the experimental destroyer (DD(X)) and nuclear powered guided missile submarine (SSGN), as well as networking our current ships and aircraft, we are building survivable and responsive combat capability for the future.

In order to build that greater combat capability, the Department of the Navy first had to take steps to stabilize the current modernization program to provide a base for building new systems and concepts. The Navy faced prior-year completion bills for ships under construction as well as cost growth in several programs. We had to take both management steps and budget actions to ensure current programs are executable. I believe our current combat capability is healthy, we have a more stable acquisition program, and this combination provides a solid foundation for Navy transformation.

Ensuring this foundation is one of the major goals of the fiscal year 2003 Budget Request. As the Secretary of the Navy testified to this committee, the Navy and Marine Corps' first priority was our commitment to our people and their training as well as to the readiness of their equipment. As the next priority, we have funded systems such as Cooperative Engagement Capability (CEC) and the Naval Fires Network (NFN) to enhance the performance of the current warfighting systems. Finally, we have sought to fully fund our ship and aircraft construction programs while adding funds to develop new capabilities such as DD(X) and SSGN. With this foundation, there are opportunities to make additional improvements in how we develop and buy new systems.

#### FUNDING TO INDEPENDENT ESTIMATES

First, as I noted, the Marine Corps and Navy have sought to ensure that programs are fully funded. The current Department of Defense (DOD) policy encourages that programs be budgeted to the Cost Analysis Improvement Group (CAIG) estimate. However, DOD's ability to develop greater capabilities and achieve higher procurement rates will be diminished if every program delivers to the CAIG estimate. Thus, once we fully fund programs, there is still an urgent need for policies and strategies that provide incentives for programs to deliver at a lower cost and on a faster pace.

##### *Buy To Budget*

I plan to work to keep a significant portion of any savings within the program. One excellent incentive option is a technique described as buy-to-budget. Under this approach, the Department would be allowed to buy additional quantities for the authorized and appropriated budget. The buy-to-budget concept has received support from Secretary Aldridge for application to the Air Force F-22 Raptor program. This concept gives industry a chance to perform better than the CAIG estimate and thereby reduce cost and produce more. The Department may even decide to view delivery to the CAIG estimate as marginal past performance for that contractor when evaluating new proposals.

Following the pattern of Secretary Aldridge on F-22, I recently signed an acquisition decision memorandum for the new sidewinder (AIM-9X) missile to encourage the procurement of the quantity allowed by the CAIG estimate, the higher quantity allowed by the program office estimate, and the possibility of buying even more missiles if additional greater efficiencies and savings can be found. Allowing the government and industry program team to deliver more systems for a fixed amount of dollars is a useful incentive. Taking dollars from a program that becomes more efficient is a disincentive to improve. I hope we can all work to keep a significant portion of any savings within a program to purchase greater quantities or to make production investments that can lower future procurement costs.

#### INFLATION AND GENERAL REDUCTIONS

Second, I would like to suggest that general reductions to programs can have a significant impact on our ability to procure efficiently. Secretary Aldridge suggested, and I agree, that each \$1 cut from a program can result in a \$3 to \$5 cost increase. If the program had a slim profit margin or a tight delivery schedule already, then the Navy and Marine Corps will be renegotiating milestones as well as schedule and program cost.

When signing a contract, the Defense Department has to work with industry to make assumptions and projections about future labor rates and material cost inflation. The reality is that software intensive weapon systems with complex technology

and low procurement rates do not generally experience inflation at the same rates as consumer products. When the Defense Department adjusts program prices to changes in consumer-based inflation indexes, we build a cost challenge into the program's budget. These reductions can also lead to re-planning of schedules and milestones if the program cannot achieve savings.

The impact of such reductions on multi-year procurements is obvious. First, the programs have few places to turn in taking reductions or achieving savings while maintaining the multi-year contract. Frequently, these decisions can have an unintended consequence of deleting cost reduction initiatives and other production process improvements. Reductions force program managers to re-plan their schedules and milestones, renegotiate contract line items, and extend the schedule for accomplishing the same work. All of these changes waste man-hours and increase cost. This process is the antithesis of affordability. The most cost effective way to deliver affordable weapons is to make realistic inflation assumptions, allocate an adequate budget, and to avoid general reductions to the program budget.

#### CLINGER-COHEN

Third, the Navy, along with the other military departments, has been working with the Office of the Secretary of Defense (OSD) to clarify the application of the Clinger-Cohen Act (CCA) requirements to information technology (IT) systems used for warfighting and to align implementation of the CCA with the existing DOD acquisition process for these systems. Positive steps are being taken to develop OSD implementing policy that recognizes the unique requirements of both processes but reduces the ambiguity, duplicative paperwork, and extraneous requirements, which arise from directly imposing CCA on the existing acquisition process. Having accomplished that, the next step will be to review how well the modified processes serve their intended purpose to improve the productivity, efficiency, and effectiveness of our programs; and if not, to take appropriate action to change the process.

#### CONTINUING RESOLUTION AUTHORIZATION GROUND RULES

Fourth, current Continuing Resolution Authorization (CRA) ground rules brought several issues to light this year. While I understand that these ground rules were established to prevent spending that may not be authorized and appropriated by Congress, there may be significant impacts to our ability to provide the best combat capability.

One of the CRA ground rules requires us to calculate the percentage of funds for programs based on the worst mark established in committee. Last year, a significant mark was made against the DD(X) program. The calculation limited our ability to pursue the Volume Search Radar (VSR) program. The Navy had to stop efforts on VSR, and the tenth *Nimitz* class aircraft carrier (CVN-77) planned to use this radar. Because of this disruption, the VSR program schedule can no longer satisfy the needs of the CVN-77 program, and the Navy now must evaluate alternate radar acquisition strategies.

#### DEVELOPMENT TEST/OPERATIONAL TEST

Fifth, I believe that Spiral Development concepts can provide more affordable programs. However, the current Development Test/Operational Test (DT/OT) testing requirements make it difficult to tailor testing to a program in spiral development. In these cases, testing requirements may kill the spiral development concept for some programs. The Department will have to work with the testing community and Congress to define new processes that allow us to develop and insert new technologies as they become available without making this insertion process unaffordable because of the cost and schedule impacts of testing.

#### TIMELINES

Finally, I am also concerned that our present budgeting and acquisition procedures, taken as a whole, frequently impede our ability to exploit technology for improved combat capability and cost reduction. While new technologies are emerging from government and commercial laboratories at an increasing rate (and in the case of high-tech electronics may become obsolete and cease production in as little as a few months), our process means that at least 2 years will elapse from the time a specific technology opportunity is recognized until funds are programmed and available to take advantage of it. My concern is not that we are missing "breakthrough" opportunities, but that we are not making effective use of the many incremental advances that are all around us.

Let me give an example of a success story, to show what can be done but too often is not. The baseline design of the F/A-18 E/F Super Hornet was decided several years ago and included a copper cable-based avionics data network which could meet or exceed the requirement and represented the state-of-the-art. The data networking needs grew with time and by mid-2000 the Program Manager (PM) realized that the bandwidth requirement for Initial Operational Capability (IOC) could probably be met by adding more cable (and weight) but that by 2010 the cabling throughout the airplane would have to be replaced with fiber optic cable at great expense. Working with what is now the Commercial Technology Transition Office (CTTO), he determined that new commercial off the shelf (COTS) fiber optic cable would meet the Super Hornet's needs into the foreseeable future and could be incorporated into the fiscal year 2003 avionics upgrade, but only if certification and other steps began right away. Armed with the fact that \$43 million in lifecycle cost could be avoided by a small investment, the PM and CTTO obtained the necessary funding in time to meet the insertion window and long before the Program Objective Memorandum (POM) process could have responded. Besides the lifecycle cost savings, the Super Hornet benefits right away from a 90 percent reduction in cable weight, 2/3 reduction in cable volume, and a 10-fold increase in data capacity.

#### ACCOMPLISHMENTS TO DATE

I have talked at length about some broad policy issues that may merit review by both Congress and the Defense Department. Now, I would like to offer a few specific examples of areas where the Navy has made positive changes in program acquisition strategies. In highlighting these examples, I would like to illustrate the benefits of the changes for modernization, since even these program adjustments will require the support of this committee. Therefore, I am grateful to the committee for the opportunity to explain our motivation.

#### DD(X)

Since I was sworn-in, I have spent more time on the DD(X) program than probably any other program. I am convinced that the family of combatants, led by DD(X), is essential to the future of the Navy. I am equally convinced that the DD 21 (the next generation destroyer) program could not continue.

The transition from DDG 51 (*Arleigh Burke* class destroyer) to DD 21 posed significant risks for the industrial base. DDG production was to end with two ships ordered in fiscal year 2004. There was to be one DD 21 ordered in fiscal year 2005, the lead ship, followed by three more orders in fiscal year 2007. The destroyer industrial base could not survive this profile, period.

The DD 21 program also allowed very little technical risk reduction, and yet, many of the technologies are quite transformational. With DD 21, we were taking a single step to full capability. There was a success-oriented assumption that everything would proceed on schedule and cost. There were limited opportunities for prototyping and no room for error. The Department was risking significant Navy dollars, the industrial base, and the future surface fleet capability.

The requirements placed on the DD 21 program were, in my view, too aggressive. The requirements process, never knowing what the future holds, is often tempted to set overly conservative requirements for the platform at hand. I believe we put too many requirements on DD 21, hedging bets that CG-21 (the next generation cruiser) may take longer than expected, or never come. The requirements drove substantial size and complexity into the ship.

In the end, these factors resulted in a ship that was at risk. Indeed, the Navy was promising to deliver, within about 8 years, a significantly larger and more complex destroyer with all new systems for the price of a current DDG. Many people felt this was a formula for problems. The CAIG certainly did not agree with the Navy cost estimate. Since funding to the CAIG estimate is current policy, this alone could have broken DD 21 or other Navy and Marine Corps programs. Thus, DD(X) was formulated to employ a broad range of strategies to make our entire family of next-generation surface combatants more affordable.

*Stable Industrial Base*—As part of the restructuring, the Department of the Navy first stabilized DDG production so that the surface combatant industrial base is not put at risk. The Future Years Defense Program includes a stable DDG profile. The budget added six DDGs in order to mitigate the severe surface combatant industrial base gap of prior profiles. This increase lowers the risk that the Navy will be able to maintain the existing surface-combatant force structure and represents the best compromise between required procurement quantities and limited resources.

Additionally, if DD(X) ship design and technology progresses and matures, the fiscal year 2006 and fiscal year 2007 funds could be reprogrammed to build DD(X).



This significant improvement in our destroyer transition plan allows us to go forward and competitively build the new family of surface combatants.

*Prototypes*—To mitigate the high technical risk, the restructured DD(X) program adds several land-based and sea-based prototypes for the key technologies. This provides an excellent means of reducing risk within each area. The Navy will see potential problems earlier in the process, providing a better chance to solve them. This strategy improves the chances of delivering a functional destroyer within cost and schedule.

*Lead ship in RDT&E*—The Navy plans to produce the lead ship of a new ship class using RDT&E funds. The Program Manager will be required to demonstrate progress on an annual basis to defend his budget. The Navy can react to problems without the risk of resorting to prior-year completion funding. The program manager can focus on establishing an efficient process for manufacturing the DD(X) class and avoid trading away producibility initiatives when costs increase. Being able to adjust the RDT&E budget for the lead ship provides the best chance to control costs and define a production process that allows the Navy to affordably build these next-generation surface combatants.

As you all recognize, construction of the lead ship in RDT&E is a significant change in the Navy's approach to shipbuilding. The Navy believes that these policy changes provide the tools to allow a more manageable execution and requests the committee's support.

*Spiral Development*—The spiral development approach will allow technologies to be fielded when they are ready through a flight approach, forged to capture cutting edge initiatives. As DD(X) drives the development of technology in many areas, we will look for opportunities to backfit advancements on existing platforms. Carefully focused upgrade and conversion programs will ensure that the existing core of surface combatants maintain the capability for battlespace dominance. Each of these strategies was employed to provide a sound way ahead for DD(X).

#### *LPD/DDG Swap*

The Navy leadership has also had lengthy discussions on the feasibility of procuring a small quantity of a single class of ships from multiple yards. With so few ships being produced, we find that there are cases where the Department is paying a significant premium for the increased overhead and ramp-up costs of using multiple yards to build a small quantity of a single class of ships. Specifically for this reason, the Navy has welcomed industry interest in the possibility of swapping LPD (Amphibious Assault Ship) work for DDG work. This strategy avoids the risk and cost of building two lead ships in a 12-ship program. Further, the strategy provides appropriate work for each yard that is well suited to their respective skills and capital investments.

#### *SSGN*

The SSGN program promises to provide a new and transforming capability for the warfighters. One of my highest priorities was to construct a SSGN acquisition strategy that provided low risk and the least chance of cost growth. As I discussed earlier, the Department's goal is to avoid building additional prior-year completion bills into the ship construction program.

My second priority was to construct a program which was conscious of the current workload in yards and which provided some flexibility for the industrial base. Lastly, I was very conscious of the potential impacts of SSGN on other ongoing Navy and Marine Corps programs.

A major concern for these conversions was the workload situation in Norfolk. The Navy is currently experiencing delays and cost growth on CVN-76 (U.S.S. *Ronald Reagan*) and the CVN-69 (U.S.S. *Dwight D. Eisenhower*) overhaul because of worker shortages, particularly in key trades such as electricians and machinists. Norfolk Naval shipyard needs to hire people in the next year to meet its currently planned workload. Norfolk Naval and Newport News are currently hiring people from each other, at higher wages, to deal with the labor shortages. Thus, the east coast SSGN conversions had the potential to dramatically increase the labor shortages in Norfolk and to force the Department of the Navy to cut, eliminate, or delay other programs currently in these yards to pay for SSGN conversion.

The Defense Department has developed an acquisition approach, which gets this transformational capability into the hands of the user quickly and uses a business-like approach to reduce cost-growth risk. The two west coast submarines will be refueled and converted concurrently. The two east coast submarines will have their conversions initiated roughly as the refueling is completed. Compared to completing four concurrent conversions, this compromise provides reduced risk and some opportunity to save dollars through learning experience from the initial conversion.

## SUMMARY

Mr. Chairman, the Navy and Marine Corps acquisition team is continuing to work very hard to build a blend of acquisition programs that maximize our current benefits while buying smart for the future. We are institutionalizing reforms that make acquisition success a common occurrence. We continue to communicate fully and openly with Congress, industry, our warfighters, and our acquisition professionals, and are doing everything it takes to make sure our sailors and marines are provided with the safest, most dependable, and highest performance equipment available within fiscal constraints. We appreciate the support provided by Congress and look forward to working together with this committee toward a secure future for our Nation.

---

 PREPARED STATEMENT BY DR. MARVIN R. SAMBUR

Mr. Chairman, Senator Inhofe, members of the subcommittee. Thank you for this opportunity to report to you on the Air Force's efforts and progress on acquisition reform. Your support, which has been so crucial to our success to date, will be vital as we work together to ensure that we continue to deliver to our warfighters capabilities they need to ensure victory.

I am pleased to report that the Air Force has come a long way in reforming the way we do business. Through our two previous sets of Lightning Bolt initiatives and through our other groundbreaking innovations, we have moved steadily toward a system that embraces the best practices of industry and government, ensuring that our acquisition and sustainment professionals have the training and the authority to innovate and challenge the status quo.

The successes have been impressive. Here are a few examples:

The C-17 Globemaster III: Our multi-year procurement of the last 80 aircraft allowed delivery 5 months ahead of schedule and avoided cost of at least \$5.4 billion. We are pleased that Congress last year gave us authority to build on that success with another multi-year procurement.

But it was not just in initial procurement that we have innovated with great success. By using commercial (FAR Part 12) procedures, we moved from concept to first production of the Extended Range Fuel Containment System—the centerline fuel tank—in just 20 months and began delivery of this new capability on aircraft 71.

Integrated Space Command and Control (ISC<sup>2</sup>): This program consolidated mission functions of Cheyenne Mountain Operations Center. By developing the system through a series of spirals, we were able to deliver new capability ahead of schedule.

F-16 FM Immunity: Europe required that all aircraft Instrument Landing System (ILS) receivers meet new frequency requirements due to interference from high-power FM and pirate radio stations. Without the change, U.S. aircraft could be denied airspace access or approach clearance. Instead of traditional procurement methods, we used a commercial, General Services Administration (GSA) catalogue solution. The result was a delivery date of 12 days, instead of 180. Initial operating capability was reached just 120 days after contract award.

Joint Direct Attack Munition (JDAM): With the support of Congress, we made JDAM a pilot program for lean acquisition. As a result, 140 much-needed JDAMs were delivered just 23 months after the start of Engineering and Manufacturing Development, we accelerated to 1,400 units in 3 months and unit cost dropped by 50 percent.

Small-Diameter Bomb (SDB): By using an innovative source selection method we held open discussions with contractors throughout a nearly paperless source selection process. The result was that the time from RFP to selection was cut from an expected 10 months to 4 months and the proposals received from competitors were all highly responsive to the request.

These are just a handful of the successes. I'd be pleased to share more of them with you. But the point is that we have proven repeatedly that when we put our collective minds to it, and when we can win your trust and support for innovation, together we can do things smartly.

Despite the impressive progress to date, much remains to be done if we are to achieve the President's and Secretary Rumsfeld's goal of truly transforming the way we conceive, develop, test, purchase, and sustain our systems. We must do a better job of learning from successes in individual programs and institutionalizing them across the Air Force.

The task may be difficult, but the goal is clear: We must reduce the cycle times for moving new technology from the laboratory to the battlefield. At the same time, we must improve our ability to estimate both costs and schedules and greatly reduce the number of program surprises that undermine confidence in our programs and

disrupt our progress. We are committed to the challenge that lies before us. Indeed, we really have no choice.

Even though the United States Air Force unquestionably has unparalleled combat capability, the events of September 11 and afterward show vividly that we now face a battlefield characterized by unpredictable, asymmetric threats that demand fundamental change. Agility, urgency, and collaboration are paramount. We can no longer treat requirements, acquisition, and sustainment as isolated, independent processes. We must build strong, enduring partnerships between our warfighters and our acquisition and sustainment professionals, so that our warfighters have the tools they need to fight and win wars. We also must seek out every appropriate way to draw on the vast knowledge base in the private sector—including non-defense industries.

Fortunately, Secretary Rumsfeld, Secretary Aldridge, and the service secretaries are fully engaged. We have no lack of support at the top! In fact, I believe we have a unique opportunity to make lasting change. Recognizing that, we already are moving out.

The Air Force launched six new initiatives—Lightning Bolts 2002—to address critical areas of our acquisition processes that need systemic improvement. Together, they form the core of what we call “agile acquisition.”

They focus on:

- Streamlining our processes to eliminate non-value added steps;
- Freeing managers to innovate and giving them a single place to come to for help in removing bureaucratic roadblocks;
- Sustaining, refreshing, and revitalizing our workforce;
- Ensuring that we are getting the best possible value from the increasing share of our procurement money that is devoted to services contracts;
- Establishing a “knowledge pipeline” with industry to ensure constant communications and improvements in processes on both sides of the government-contractor fence; and
- Establishing collaborative spiral development as the preferred way of doing business and requiring heretofore-unseen levels of collaboration between our warfighters and the acquisition communities.

Each of these initiatives will substantially increase our ability to respond more quickly and reliably to our warfighters needs.

Streamlined processes: We are now in the process of developing a new Air Force acquisition regulation. Our goal is to replace our current high prescriptive regulation with one that, within all the bounds of acquisition law and existing DOD regulation, allows our program managers to tailor their acquisition strategies to their program while maintaining a process of fairness, transparency, and integrity.

Freeing managers to manage and providing them the help they need to succeed: In December, we stood up the Acquisition Center of Excellence (ACE) and appointed one of our most innovative and senior program managers to run it. The Center is leading the effort to draft the new regulation. It will also become the focal point for lessons learned as we experiment with innovative acquisition strategies. Most importantly, it will become the place for Air Force acquisition professionals to turn when they need help pushing through the bureaucracy. Already, the ACE is asked daily for advice.

Sustaining and revitalizing our workforce: No matter what processes we adopt, people will always be the key to achieving acquisition excellence. I know this committee is aware of the changes we face in the human resources arena. They are similar to those faced throughout the government, only worse. As you are aware, nearly half of our technical workforce will be eligible to retire by 2005. That represents a potentially crippling brain drain and comes on top of significant personnel reductions over the past decade that have already resulted in lost talent, institutional memory and mentoring capability.

The numbers are troubling. Our acquisition workforce has been drawn down by 42 percent from fiscal years 1989–2001. For the last 2–3 years we have begun seeing symptoms indicating that the acquisition workforce has been cut too deeply. The following is an excerpt from testimony provided to House Appropriations Committee, Surveys and Investigations staffers during a visit to the Air Force Flight Test Center:

“While end strength has continually decreased since 1989, workload has dramatically increased. Modeling and simulation, ground testing, test planning and engineering analysis, evaluation, and reporting workloads have dramatically increased since 1989. The nature of testing has changed. A major part of the testing and evaluation workload has shifted from flight dynamics (performance, flying qualities, airframe flutter, and loads) to avi-

onics and electronic warfare evaluations. This shift has been caused by the development of exceptionally complex and totally integrated avionics and electronic warfare systems that must be extensively tested prior to delivery to the operational testers and, ultimately to the warfighter. Consequently, our need for engineers (particularly systems engineers) is higher than ever as older platforms such as the B-52, C-130, C-5, and T-38 undergo upgrades and as new systems are integrated to achieve the full-spectrum, effects-based capabilities our warfighters need.

The continuing shortage of acquisition personnel means resources are not available to develop new techniques and data analysis tools for weapons systems. Impacts are seen in all phases of the test process, and ultimately can result in either a delay in fielding the system or the lack of adequate testing which can cause system problems that don't surface until operational testing or after the system is fielded."

Overall, acquisition workforce reductions are best evidenced by the decline in corporate knowledge. To avoid reductions-in-force during acquisition reductions, the AF has aggressively utilized Voluntary Separation Incentive, Voluntary Early Retirement, management reassignment placements, and normal attrition. As a result, many of the people that have left were those with the greatest experience and knowledge, which has seriously degraded our experience levels.

Agile Acquisition addresses some of these problems. First, we plan to increase participation in the Acquisition Workforce Demonstration Program, which gives us great hiring flexibility and gives managers the ability to reward outstanding achievement. Your support for this program, which was implemented in my headquarters organization and at Edwards Air Force Base, California, has made a huge, positive difference. We have measurable, verifiable results that show that the tools given to us by this demonstration project are working to improve the workforce. We need to move aggressively to implement this demonstration throughout the acquisition workforce.

Air Force Materiel Command also has taken on the critical task of re-engineering our acquisition training so that we, as our Lightning Bolt says, begin "breeding innovators." Today, too much of our training is focused on how to follow processes. We need to train people to think, take reasonable risks and innovate. We will do that through a new "Change Culture Process," in partnership with both the National Defense University (NDU) and the Defense Acquisition University (DAU) for virtual learning. The huge personnel turnover we face in the next decade is daunting, but it is also a once-in-a-generation opportunity to mold a new workforce and ensure that it is ready for the 21st century acquisition challenges.

Managing services contracts: The Air Force recently established a Program Executive Officer (PEO) for Services Contracting. In this role, the new PEO will be the Air Force focal point for all matters of Services Acquisition. The PEO will provide centralized AF senior leadership on services acquisition, particularly for efforts over \$100 million in value as well as all A-76 studies involving more than 300 positions. Additionally, the PEO will facilitate the use of Performance Based Services Acquisition (particularly focused on performance-based specifications) and assure the appropriate application of lessons learned from multiple experiences. The PEO will also ensure that the Air Force balances its concentration on services efforts post award and not just on pre-award issues.

Sharing information with industry: We must find a better way to cultivate understanding between the government and industry on acquisition policy. Obviously, when we buy from industry, we have an obligation to the taxpayers to ensure that we get the best value for their money. At the same time, both sides in this relationship can benefit from the other's vast knowledge stores by sharing best practices—and not just with the defense industry but also with those who we have never thought of doing business with us. We briefed some of the top leaders of the defense industry on this idea in December and the reaction was very encouraging. Over the next 6 months, we will be working to further develop this idea.

Collaborative spiral development: This is the area with the greatest potential to enable transformation and significantly reduce cycle time and increase credibility. All too often, our long cycle times and our program breakages have their roots in the way we conceive, plan and start our acquisitions. Our processes are too serial and allow each community involved to work too much in isolation. Too often, the warfighter decides a capability is needed and works for months or years to develop a 100 percent solution that is given to the acquisition community as a requirement. The acquirers then struggle to come up with an acquisition strategy that will meet the requirement within a limited budget. Because we are looking for a "big bang," all-at-once delivery of capability, the development timeline—which drives both schedule and cost—is long and fraught with possibilities for things to go wrong. On

major systems, our cycle time has steadily grown too long. If we include the time to develop the requirements and select a contractor, the time is even longer. Imagine the changes in technology, threat, and manufacturing circumstances that occur during that timeframe. Given the odds, it is not amazing that we have programs that break; it is amazing that more of them do not get in trouble.

There is a better way. With collaborative spiral development, we will bring warfighters, scientists, acquirers, testers, budget planners, logisticians, and anyone else who needs to be involved together from the start to develop realistic, incremental, and disciplined plans to deliver new capability to the warfighter as quickly as possible. We will change the mindset that says we won't deliver a product until we can deliver the 100-percent solution. Instead, we will work together to understand the trades that must be made, to ensure that capability is delivered as soon as possible and to assure the warfighter that each successive spiral, even if it is not fully defined at the outset, will bring increased capability.

By delivering capability in increments, with a period for the warfighter to "use and learn" at each increment, we can incorporate what is learned in each new spiral. Because the spiral will be short, schedules and cost estimates will be more reliable and programs will be less subject to funding fluctuations. There will be many opportunities to rapidly inject new technology as a system develops as well as to look at requirements and re-prioritize as world events and threats change. Bringing the communities together will help us ensure that our science and technology programs are focused in areas that truly address the warfighters long-term capabilities roadmaps. It will also allow us to collapse our testing schedules, replacing the separate and often-repetitive Developmental Testing and Operations Testing regimes with a single, integrated, and rigorous verification program.

This new approach will require all of us—in DOD, in Congress and in industry—to change the way we think about systems development. For this to work we must be willing to accept and fund programs that are not fully defined 10 years down the road. Let me be clear: We are not asking for a blank check. But we will be asking for an understanding that highly developed plans that claim to predict the exact state and cost of complex technology a decade or more into the future are, at best, speculative and often provide little more than a false sense of security. We believe the collaborative spiral approach, which demands success in increments, will allow everyone involved—including Congress—to determine repeatedly if we are on the right track. It will force all involved to re-evaluate programs regularly as they move through spirals and learn from experience. It will offer the opportunity to accelerate those programs that become higher priorities and fix or kill those that are not performing or, due to changed circumstances, provide marginal utility.

These initiatives will help increase budget stability and improve cost and schedule estimates across Air Force weapons system program acquisition. More importantly, they will enable us to accelerate the delivery of new capabilities that the warfighter can use.

One of our "pathfinders" in this new way of working is the Unmanned Combat Aerial Vehicle (UCAV) program. We are hopeful that by using a highly collaborative spiral approach we will deliver the first fieldable prototype UCAV to the warrior as much as 5 years earlier than we would have through the traditional, serial, all-or-nothing requirements and acquisition approaches. The first deliverables will not give the warfighter everything he or she wants, but that is okay. We will deliver a capability that the warfighter can use and learn from, with the experience being fed back into the next spirals.

Other initiatives: Two other critical components of acquisition excellence are the expanded use of commercial acquisition processes and increased leverage of the commercial market. Additionally, the Air Force supports a number of initiatives being pursued by the Department of Defense to improve the efficiency of the acquisition process by streamlining processes and striving toward e-business. These initiatives include ensuring test and evaluation processes support evolutionary acquisition and creating an electronic business vision and roadmap for defense acquisition.

Mr. Chairman, the Air Force leadership is absolutely committed to achieving acquisition excellence. We are challenging everything we do and looking for ways to do them faster, cheaper and better. I assure you that our sense of urgency could not be higher and we are marching in lockstep with Secretary Aldridge and his staff to ensure that we do not lose the momentum that is building behind this effort. As always, we look forward to working with you to ensure that our warfighters have the tools they need to ensure decisive victory, no matter what the threat. Thank you again for your continuing support.

[The prepared statement of Messrs. Jack L. Brock, Jr. and Randolph C. Hite follows:]

GAO

United States General Accounting Office

Testimony

Before the Subcommittee on Readiness and  
Management Support, Committee on Armed Services,  
U.S. Senate

For Release on Delivery  
Expected at 10:00 a.m., EDT,  
Wednesday, February 27, 2002

DEFENSE ACQUISITIONS

DOD Faces Challenges in  
Implementing Best  
Practices

Statement for the Record by Jack L. Brock, Jr., Managing  
Director, Acquisition and Sourcing Management, and  
Randolph C. Hite, Director, Information Technology  
Architecture and Systems



GAO-02-469T

---

Mr. Chairman and Members of the Subcommittee:

Thank you for the opportunity to submit this statement for the record. At your request, we are discussing our work on best practices related to the acquisition of services, information technology, and weapon systems. Additionally, we are providing you with information on our other work for the subcommittee related to acquisitions.

The Department of Defense (DOD) relies heavily on acquisitions. It spends close to \$100 billion annually to research, develop, and acquire weapon systems and tens of billions more for services and information technology. Moreover, this investment is expected to grow substantially. From 1995 to 2007, investments in weapon systems are planned to escalate from \$90 billion to \$157 billion—about a 74-percent increase. And over the next 5 years, starting in fiscal year 2003, DOD's request for weapon system development and acquisition funds is estimated to be about \$700 billion. Similarly, DOD's spending on services is expected to continue to grow, largely attributable to increased purchases of information technology services and professional administrative and management support services.

The goals for this investment are ambitious. While continuing to keep legacy systems, DOD plans to fund newer programs such as Global Hawk and Predator, as well as future capabilities such as unmanned airplanes, satellite networks, and information and communication systems. Additionally, information technology is expected to play a critical role in DOD's business transformation.

Despite these heavy investments, our work continues to show that DOD is not carrying out acquisitions cost-effectively and that the acquisitions themselves are not always achieving DOD's objectives. Although the department has many acquisition reform initiatives in process, pervasive problems persist regarding the use of high risk acquisition strategies; questionable requirements and solutions that are not the most cost-effective available; and unrealistic cost, schedule, and performance estimates. For these reasons, we have reported DOD contract management, information technology management, and weapon systems acquisition as high risk areas for more than a decade.<sup>1</sup>

---

<sup>1</sup> U.S. General Accounting Office, *High Risk Series: An Update*, GAO-01-263 (Washington, D.C.: Jan. 2001).

---

To help DOD meet these challenges, you have asked us over the past several years to identify how leading organizations are addressing similar problems. Our work has identified numerous practices and principles that have consistently resulted in better outcomes—including dramatic cost savings, improved services and products, and ultimately, a better return on investment. The changes leading organizations make often reflected common sense approaches, but they are nevertheless dramatically different from the traditional ways of doing business and they each enhance performance. For example:

- In analyzing just how much was being spent on acquiring services and where the dollars were going, leading organizations were able to substantially reduce the number of suppliers and negotiate lower rates. Sometimes, thousands of suppliers were reduced to just a few.
- Leading organizations were able to make sure that their business systems could interoperate and truly help to achieve corporate—rather than business unit—objectives by using enterprise architectures to guide and constrain their investments. These architectures are essentially blueprints that define where the organization is going in terms of mission, business operations, and technology.
- In developing and manufacturing complex products, leading organizations have learned to treat technology development and product development differently and manage them separately. Doing so helped them to reduce design and production difficulties and to deliver more sophisticated products quicker and cheaper.

DOD is committed to adopting many best practices and has already taken steps to change its policies and procedures. Implementing these practices, however, will be extremely challenging. For instance, the sheer size of the department, the number of acquisitions, and the hundreds of organizations involved will make it difficult to gain much-needed visibility over spending on services as well as to implement enterprisewide management and oversight mechanisms. Moreover, the changes DOD makes must extend well beyond policies and procedures. Incentives driving traditional ways of doing business, for example, must be changed, and cultural resistance to new approaches must be overcome. Undoubtedly, DOD will need strong and sustained commitment from its leadership to tackle these more elusive challenges—not just to initiate changes but to continually support them.



## Best Practices in the Acquisition of Services

DOD is, by far, the government's largest purchaser of services. In fiscal year 2000 alone, it bought more than \$53 billion in services ranging from clerical support and consulting, to information technology services, to the management and operation of facilities. However, this spending is not being managed efficiently. Responsibility for acquiring services is spread among individual military commands, weapon system program offices, or functional units on military bases, with little visibility or control at the DOD- or military department level. And when it comes to making procurements, our work, as well as that of other oversight agencies, continues to show that requirements are not always clearly defined, alternatives are not fully considered, and contractors are not adequately overseen. DOD leadership has recognized the need to change current practices for acquiring services and is seeking to adapt the same revolutionary business and management practices that helped the commercial sector gain a competitive edge.

## GAO Findings

In view of private sector successes with service acquisitions, this subcommittee asked us to examine how leading companies reengineered their approach and the extent to which DOD is pursuing a similar approach. Our first report, which describes the general framework adopted by leading companies, was issued in January 2002.<sup>2</sup>

The leading companies we studied made a number of dramatic changes to the way they bought services and found that these changes, in turn, resulted in significant cost savings and service improvements. These changes generally began with a corporate decision to pursue a more strategic approach to acquiring services. Taking a strategic approach involves a range of activities—from developing a better picture of what the company is spending on services, to taking an enterprisewide approach to procuring services, to developing new ways of doing business. For example:

- The companies we visited analyzed their spending on services to answer the basic questions of how much was being spent and where the dollars were going. In doing so, they realized that they were buying similar services from numerous providers, often at greatly varying prices. The

<sup>2</sup>U.S. General Accounting Office, *Best Practices: Taking A Strategic Approach Could Improve DOD's Acquisition of Services*, GAO-02-230 (Washington, D.C.: Jan. 18, 2002).

companies used this data to rationalize their supplier base, or in other words, to determine the right number of suppliers that met their needs.

- The companies we studied changed how they acquired services in significant ways. They elevated or expanded the role of the company's procurement organization; designated commodity managers to oversee key services; and made extensive use of cross-functional teams to help identify their service needs, conduct market research, evaluate and select providers, and manage performance.

Bringing about new ways of doing business was challenging. For example, some companies spent months piecing together data from various financial management information systems and examining individual purchase orders just to get a rough idea of what they were spending on services. Other companies found that in establishing new procurement processes, they needed to overcome resistance from individual business units reluctant to share decision-making responsibility and to involve staff that traditionally did not communicate with each other. To do so, the companies found they needed to have sustained commitment from their senior leadership; to clearly communicate the rationale, goals, and expected results from the reengineering efforts; and to measure whether the changes were having their intended effects. The figure below highlights specific principles and practices the companies we studied followed.

Figure 1: Principles and Practices of Leading Companies

<b>Commitment...</b> <i>Secure up front commitment from top leaders</i>
<ul style="list-style-type: none"> <li>• Recognize and communicate the urgency to change service spending practices</li> <li>• Provide clear and strong executive leadership, including goals and targets</li> </ul>
<b>Knowledge...</b> <i>Obtain improved knowledge on service spending</i>
<ul style="list-style-type: none"> <li>• Develop information system to identify how much is being spent with which service provider for what services</li> <li>• Analyze the data to identify opportunities to reduce costs, improve service levels, and provide better management of service providers</li> </ul>
<b>Change...</b> <i>Create supporting structure, processes, and roles</i>
<ul style="list-style-type: none"> <li>• Create or identify organizations responsible for coordinating or managing service purchases</li> <li>• Establish proactive business relationships between end users, purchasing units, and other stakeholders</li> <li>• Implement more integrated team-based sourcing processes</li> <li>• Create commodity/service experts</li> </ul>
<b>Support...</b> <i>Enable success through sustained leadership, communication, and metrics</i>
<ul style="list-style-type: none"> <li>• Obtain sustaining support from senior leadership to facilitate change</li> <li>• Establish clear lines of communication between all affected parties</li> <li>• Demonstrate value and credibility of new processes through use of metrics</li> </ul>

Source: GAO analysis.

Taking a strategic approach clearly paid off, as companies found that they could save millions of dollars and improve the quality of services received by instituting these changes. In some cases, thousands of suppliers were reduced to a few, enabling the companies to negotiate lower rates. In other cases, new information systems enabled companies to better match their business managers' needs with potential providers.

The strategic approach taken by the leading firms we visited could serve as a general framework to guide DOD's service contracting initiatives. DOD has certain elements critical to taking a strategic approach already in place, such as the commitment by senior leadership to improve its practices for acquiring services and to adopting best commercial practices. However, DOD has not conducted a comprehensive analysis of its spending on services or thoroughly assessed its current structure, processes, and roles—two elements that companies found to be crucial to reengineering their approaches to purchasing services. It also lacks a strategic plan that integrates or coordinates the various initiatives

---

underway within the department or that provides a road map for identifying or prioritizing future efforts.

To achieve the significant improvements possible by the use of best practices in the acquisition of services, we recommended that the secretary of defense evaluate how a strategic reengineering approach, such as that employed by the leading companies we visited, could be used as a framework to guide DOD's reengineering efforts. Specifically, we recommended that DOD assess (1) whether current or planned financial or management information systems can provide the type of spending data that DOD needs to identify opportunities to leverage its buying power and improve oversight and (2) whether its current organizational structure, processes, and roles are adequate to support a more strategic approach to acquiring services.

DOD concurred with our recommendations, and it is implementing improvements on several fronts. For example, it will be upgrading the Federal Procurement Data System to provide more detail on service acquisitions.

DOD is also required by the National Defense Authorization Act for Fiscal Year 2002 to establish and implement a management structure for the procurement of services comparable to the management structure that applies to the procurement of products by DOD, and to establish a data collection system to provide management information on each purchase of services in excess of the simplified acquisition threshold.

---

#### Challenges Still Ahead

Undoubtedly, DOD will find it challenging adopting best practices for buying services. First, DOD's size and the range and complexity of the services it acquires may mean that it cannot adopt a "one-size-fits-all" approach to services acquisitions. According to DOD officials, there are individual commands that are comparable to a Fortune 500 company, each spending billions of dollars annually on services. Further, while some services can be acquired departmentwide, others (such as ship support and maintenance) may be unique to specific commands, units, or geographic locations. Other challenges that could affect DOD's service contracting initiatives include existing problems in its information technology and financial management systems and the unique requirements of the federal environment.

As noted earlier, our January report provided an overall framework of practices. We plan to assess each practice area in more depth, looking

	<p>further at such questions as what are the best practices for conducting a spending analysis and how to ensure an organization is getting the right information.</p>
<p><b>Best Practices in Information Technology Acquisitions</b></p>	<p>DOD is the federal government's largest consumer of information technology (IT) resources, spending almost \$22 billion on IT in fiscal year 2001. For this reason, it is critical that DOD adopt effective IT acquisition practices. Our past reviews have shown that this is not always done. Particularly, because of inefficient and ineffective processes, DOD is at risk of pursuing systems and services that do not deliver value commensurate with costs, and that are duplicative, are not well integrated, and do not help to optimize mission performance.</p>
<p><b>GAO Findings</b></p>	<p>Our work in recent years has looked at best practices for acquiring IT systems and acquiring IT services (e.g., network support or help desk support). Like the framework we described for services acquisitions, these practices do not represent cookie cutter approaches; rather, they need to be tailored to the type of system and service being acquired, how it will be used, and its importance to an organization.</p> <p><b>IT System Acquisitions:</b> The goals of any IT system acquisition, whether commercial-off-the-shelf (COTS)-based or customized, can be viewed as threefold: (1) to deliver needed functional and performance capabilities by a certain time for a certain cost, (2) to reasonably ensure that, over the system's useful life, these capabilities will provide mission or business value in excess of costs, and (3) to ensure that the system is defined, designed, and implemented in a manner that properly fits within the context of the organizationwide systems environment. In pursuit of these goals, we have categorized IT system acquisition best practices into three corresponding groups, and we apply these practices, as appropriate, in our evaluations of system acquisition across the federal government, including recent and ongoing work at DOD for the Senate Committee on Armed Services. A brief description of the three categories follows:</p> <ul style="list-style-type: none"> <li>• <i>Is the system being acquired in accordance with mature software acquisition processes?</i> The Software Engineering Institute (SEI),<sup>3</sup></li> </ul>

<sup>3</sup> SEI is a nationally recognized, federally funded research and development center established at Carnegie Mellon University to advance the state of software engineering, development, and acquisition practices.

---

recognized for its expertise in software processes, publishes best practice models and methods governing software engineering, acquisition, and development. Collectively, these best practice tools provide logical frameworks for understanding the strengths and weaknesses of an organization's existing software practices, including acquisition practices, and a structured approach for incrementally implementing them. For example, SEI has defined a five stage software acquisition capability maturity model with specific best practices associated with each stage of maturity, including practices governing acquisition planning, solicitation, requirements development and management, project management, contract tracking and oversight, evaluation, and risk management.<sup>4</sup> Other examples of SEI best practice models include its emerging Integrating Technology by a Structured Evolutionary Process model, which addresses the unique challenges associated with COTS-based systems, and its IDEALSM,<sup>5</sup> model, which provides a systematic, five phase best practices-based approach to continuously improving software practices.

- *Is the system being acquired in a series of economically justified incremental builds?* Both federal law and guidance<sup>6</sup> advocate the use of incremental investment management when acquiring or developing large systems. Incremental investment management can be broken into three major practices: (1) acquiring/developing the system in a series of smaller system increments, (2) individually justifying investment in each separate increment on the basis of costs, benefits, and risks, and (3) monitoring actual benefits achieved and costs incurred on ongoing increments and applying these lessons learned to future increments. Using these system investment practices helps to prevent discovering too late that a given acquisition/development effort is not cost beneficial.

---

<sup>4</sup> Software Acquisition Capability Maturity Model® (SA-CMM ®), Version 1.02. Capability Maturity ModelSM is a service mark of Carnegie Mellon University, and CMM® is registered in the U.S. Patent and Trademark Office.

<sup>5</sup> IDEALSM is a service mark of Carnegie Mellon University and stands for initiating, diagnosing, establishing, acting, and leveraging.

<sup>6</sup> Clinger-Cohen Act of 1996, P.L. 104-106, and Office of Management and Budget Circular A-130 (Nov. 30, 2000).

- 
- *Is the system's proposed architecture compliant with the organization's relevant enterprise architecture(s)?* Enterprise architectures<sup>7</sup> are essential tools for effectively and efficiently reengineering business processes and for acquiring and evolving supporting systems. As such, using them is a recognized best practice that is embodied in federal guidance.<sup>8</sup> An enterprise architecture can be viewed as a master blueprint that defines operational and technological change across a given entity, which can be an organization (e.g., a military service or Defense agency) or a functional or mission area spanning more than one organization (e.g., financial management or combat system identification). In some cases, both organizational and functional/mission area architectures are appropriate because organizations interrelate closely, sharing functional and mission area responsibilities. This is the case for DOD and its component organizations.

**IT Service Acquisitions:** At the request of this committee, we studied IT services acquisition best practices and captured these practices in a framework, which includes seven phases as described below.<sup>9</sup> Embedded within each of the phases are specific practices. For example, during the first phase, the business and technical reasons for undertaking an outsourcing effort are explicitly described. This practice ensures, among other things, that the organization has evaluated the appropriateness of outsourcing in its environment. During the second phase, the boundary of responsibilities between provider and acquirer is defined. This takes place prior to even developing the proposal so that the acquirer understands what resources will be required of it, and the prospective provider understands its responsibilities prior to bidding. The remaining phases of the framework focus on managing and monitoring provider performance.

---

<sup>7</sup> These architectures systematically capture—in useful models, diagrams, and narrative—the relevant breadth and depth of the mission-based mode of operation for a given enterprise. Moreover, they describe these operations in both (1) logical terms, such as interrelated processes, information needs and flows, work locations, and system applications, and (2) technical terms, such as hardware, software, data, communications, and security attributes, and standards. They also provide these perspectives both for the enterprise's current or "as is" environment for its target or "to be" environment, as well as a plan or road map for moving between the two environments.

<sup>8</sup> Chief Information Officer's Council, *A Practical Guide to Federal Enterprise Architecture*, Version 1.0 (February 2001).

<sup>9</sup> U.S. General Accounting Office, *Information Technology: Leading Commercial Practices for Outsourcing of Services*, GAO-02-214 (Washington, D.C.: Nov. 30, 2001).

**Table 1: Description of Phases for IT Outsourcing**

Phase	Definition
1. Determine sourcing strategy	Determine whether internal capability or external expertise can more effectively meet IT needs.
2. Define operational model	Formalize executive leadership, team composition, client responsibilities, and operating relationships between client and provider organizations.
3. Develop the contract	Establish the legal terms for the IT outsourcing relationship.
4. Select provider(s)	Find one or more providers who can help reach IT outsourcing goals.
5. Transition to provider(s)	Transfer responsibility of IT functions to one or more providers.
6. Manage provider(s) performance	Make sure each provider is meeting performance requirements.
7. Ensure services are provided	Periodically benchmark whether end-users needs are being met to assess whether the organization is still getting good value.

In addition, the framework recognizes three critical success factors that transcend the seven phases: executive leadership, partner alignment, and relationship management. For example, relationship management describes a process of managing the vendor's performance that goes beyond the specifics of the contract. In relationship management, the acquirer and the provider work together to identify issues and concerns before they evolve into situations requiring official action.

DOD Has Inconsistently  
Applied Best Practices

Our recent work has shown that DOD has not consistently applied best practices when acquiring IT. For example, we recently reported to this committee that two Defense Logistics Agency (DLA) system acquisitions—the Business Systems Modernization (BSM) and the Fuels Automated System (FAS)<sup>10</sup>—represented a “tale of two cities” with regard to application of the best practices embodied in SET’s software acquisition

<sup>10</sup>BSM is intended to modernize DLA’s materiel management business functions, thereby enabling the agency to manage supply chains. BSM is based on commercially available software products and is expected to cost \$658 million from fiscal years 2000 through 2005. FAS is intended to help the Defense Energy Support Center annually manage about \$5 billion in contracts with petroleum suppliers. FAS also relies on a commercially available software package and is expected to cost \$293 million from fiscal year 1995 through 2002.

maturity model.<sup>11</sup> Specifically, while DLA was implementing the vast majority of these best practices on BSM, it was not on FAS because of resource constraints. By not following these practices, we concluded that FAS was at risk of not delivering promised system capabilities on time and within budget. To address the weaknesses we identified, we made a number of specific recommendations that DLA intends to implement, including launching a software process improvement program.

We also recently reported to this committee that DOD components varied in the degree to which they were implementing software process improvement.<sup>12</sup> In particular, we reported that the Air Force, the Army, and the Defense Finance and Accounting Service generally satisfied the best practice tenets of SEI's IDEALSM model, as did certain Navy units. However, DLA, the Marine Corps, and other Navy units did not. This particular model defines a systematic, five-phased approach for software process improvement. Accordingly, we made recommendations to correct these weaknesses, which DOD is implementing.

In July 2000, we reported on DOD system acquisitions that were not employing incremental investment management best practices.<sup>13</sup> As an example, we reported that the department had divided its multi-year, billion dollar Standard Procurement System (SPS)<sup>14</sup> into a series of incremental system releases. However, it had not treated each of these system increments as a separate investment decision. Instead, it had treated investment in all SPS increments as a single decision that it made when the acquisition was begun. Moreover, it was not attempting to validate whether expected system benefits were actually accruing from deployed system releases. This type of approach to making investment

<sup>11</sup>U.S. General Accounting Office, *Information Technology: Inconsistent Software Acquisition Processes at the Defense Logistics Agency Increase Project Risks*, GAO-02-9 (Washington, D.C.: Jan. 10, 2002).

<sup>12</sup>U.S. General Accounting Office, *DOD Information Technology: Software and Systems Process Improvement Programs Vary in Use of Best Practices*, GAO-01-116 (Washington, D.C.: Mar. 30, 2001).

<sup>13</sup>U.S. General Accounting Office, *DOD Systems Modernization: Continued Investment in the Standard Procurement System Has Not Been Justified*, GAO-01-682 (Washington, D.C.: July 31, 2001) and U.S. General Accounting Office, *Information Technology: DLA Should Strengthen Business Systems Modernization Architecture and Investment Activities*, GAO-01-631 (Washington, D.C.: June 29, 2001).

<sup>14</sup>SPS is intended to be DOD's single, standard procurement system and is expected to cost \$3.7 billion over a 10-year period.



decisions has historically resulted in agencies' investing huge sums of money in systems that do not provide commensurate benefits, and thus has been abandoned by successful organizations. Accordingly, we made a series of recommendations to correct the situation. DOD is in the process of addressing our recommendations.

Lastly, in June 2001, we reported that DOD was in the process of investing billions of dollars in acquiring various financial and logistics management systems without having enterprise architectures for either functional area to guide and constrain these investments.<sup>16</sup> As part of these reports, we made a series of recommendations to systematically correct this IT acquisition weakness. DOD has initiated steps to implement the recommendations.

#### Challenges Ahead

While DOD has taken steps to implement our recommendations, the challenges ahead are still substantial. To make the most out of its investment in IT, DOD needs to fully incorporate best practices into its policies and procedures and implement our recommendations. Until this is done, DOD risks not meeting its objectives—leading to costly scheduling delays and rework.

Our work for the committee will continue to look at systems acquisitions important to DOD operations and determine whether best practices are being effectively applied to them. Currently, we are evaluating how effectively best practices have been applied to DOD's Composite Health Care System. We are also working with this committee to identify DOD IT acquisitions to evaluate against our IT outsourcing framework.

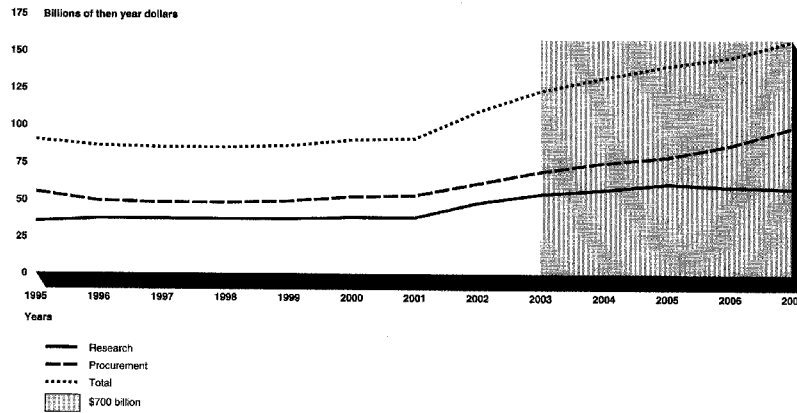
#### Best Practices for the Acquisition of Weapon Systems

As noted earlier, DOD spends close to \$100 billion annually to research, develop, and acquire weapons systems. Moreover, it is seeking to considerably ramp up spending to replace a force it believes is becoming outdated and too costly to operate. (See fig. 2 for DOD's planned investments in weapon systems.) Our reviews over the past 20 years have consistently found the same problems with these investments—cost

<sup>16</sup>U.S. General Accounting Office, *Information Technology: Architecture Needed to Guide Modernization of DOD's Financial Operations*, GAO-01-525 (Washington, D.C.: May 17, 2001) and U.S. General Accounting Office, *Information Technology: DLA Should Strengthen Business Systems Modernization Architecture and Investment Activities*, GAO-01-631 (Washington, D.C.: June 29, 2001).

increases, schedule delays, and performance shortfalls. Clearly, it is critical to find better ways of doing business—to make sure that weapon systems are delivered on time, at cost, and effectively. Failure to do so can jeopardize other programs in the department and limit DOD's ability to effectively execute warfighting operations.

Figure 2: Research, Development, Test and Evaluation and Procurement Funding for Fiscal Years 1995 to 2007



#### GAO Findings

At the request of the committee, we have undertaken an extensive body of work that examines weapon acquisition issues from a different, more cross-cutting perspective—one that draws lessons learned from the best commercial product development efforts to see if they apply to weapon system improvement.

This work has consistently shown that leading commercial firms expect that their program managers will deliver high quality products on time and within budget. Doing otherwise could result in the customer walking away. Thus, the firms have created an environment and adopted practices that put their program managers in a good position to succeed in meeting

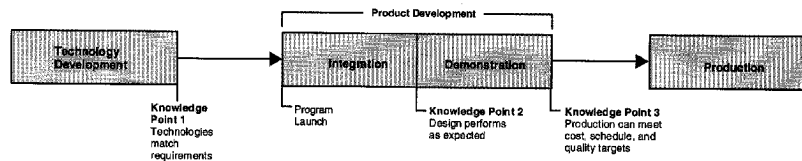
these expectations. Collectively, these practices ensure that a high level of knowledge exists about critical facets of the product at key junctures during development. Such a knowledge-based process enables decision makers to be reasonably certain about critical facets of the product under development when they need it.

The process followed by leading firms can be broken down into three knowledge points:

- At program launch, when a match must be made between the customer's needs and the available resources—technology, design, time, and funding;
- Midway through development, when the product's design must demonstrate its ability to meet performance requirements; and
- At production start, when it must be shown that the product can be manufactured within cost, schedule, and quality targets.

Figure 3 further illustrates how this process works, while figure 4 highlights some specific best practices within this process as well as criteria used to move forward.

Figure 3: Knowledge-based Process for Applying Best Practices to the Development of New Products



Source: GAO analysis.

Figure 4: Highlights of Specific Best Practices

Knowledge Point 1
<ul style="list-style-type: none"> <li>● Separate technology from product development.</li> <li>● Have clear measures and high standards for assessing technology maturity, such as technology readiness levels.</li> <li>● Use a disciplined systems engineering process for translating and balancing customer desires with the product developer's technology, design, and production limitations; in other words, bring the right knowledge to the table when laying down a program's foundation.</li> <li>● Identify the mismatches between desired product features and the product developer's knowledge and either (1) delay the start of the new product development until the knowledge deficit can be made up or (2) reduce product features to lessen their dependence on areas where knowledge is insufficient (evolutionary acquisition). The main opportunities for trading off design features to save time and money occur here, before a program is started.</li> </ul> <p><i>When do you know you have achieved this knowledge point? When technologies needed to meet essential product requirements have been demonstrated to work in their intended environment and the producer has completed a preliminary design of the product.</i></p>
Knowledge Point 2
<ul style="list-style-type: none"> <li>● Hold a major decision review between system integration and system demonstration that determines the product design is stable and includes specific criteria to move into the system demonstration phase.</li> <li>● Use integrated engineering prototypes to demonstrate design stability and prove with testing that the design meets the customer requirements. It is important that this happen before initial manufacturing begins—a point when investments are increased to produce an item.</li> <li>● Identify critical manufacturing processes and establish a plan to bring these under statistical control by the start of production; also establish reliability goals and a growth plan to achieve these by production. This facilitates the achievement of process control and reliability goals at the completion of knowledge point 3.</li> </ul> <p><i>When do you know you have achieved this knowledge point? When 90 percent of engineering drawings are released to manufacturing organizations. Drawings are the language used by engineers to communicate to the manufacturers the details of a new product—what it looks like, how its components interface, how to build it and the critical materials and processes needed to fabricate it. This makes drawings a key measure of whether the design is stable or not.</i></p>
Knowledge Point 3
<ul style="list-style-type: none"> <li>● Demonstrate that all critical manufacturing processes are under statistical control and consistently producing items within the quality standards and tolerances for the overall product before production begins. This is important since variation in one process can reverberate to others and result in defective parts that need to be repaired or reworked.</li> <li>● Demonstrate product reliability before the start of production. This requires testing to identify the problems, design corrections, and retest the new design. Commercial firms consider reliability important and its achievement a measure of design maturity.</li> </ul> <p><i>When do you know you have achieved this knowledge point? When all key manufacturing processes have come under statistical control and product reliability has been demonstrated.</i></p>

Source: GAO analysis.

Knowledge-based acquisitions  
embraced in DOD policy

We have found that when DOD programs employed similar practices, they have experienced outcomes similar to leading firms. The AIM-9X air-to-air missile program is a good example. By adopting practices that mature technology before going into product development and stabilized the design by releasing over 90 percent of the drawings, the program has experienced very minimal cost increases and scheduling delays.

Conversely, problems occur in programs when best practices are not adopted. For example, the PAC-3 missile program began nearly 5 years before most of the technical discovery was complete, and only 20 percent of design drawings were released at the point when knowledge point 2 should have been achieved. As a result, the early part of the program was plagued with technical difficulties that impaired efforts to stabilize design, and manufacturing the missile has been difficult. The result was costs that doubled and over a 3-year schedule delay.

In 2000 and 2001, DOD made constructive changes to its acquisition policy that embrace best practices. These focused primarily on (1) making sure technologies are demonstrated to a high level of maturity before beginning a weapon system program and (2) taking an evolutionary, or phased, approach to developing the system.

DOD's policy changes are a positive step. First, they would separate technology development from a weapon system development program. This would help to curb incentives to overpromise the capabilities of a new weapon system and to rely on immature technologies. By having a baseline requirement, decisionmakers would also have a means for deciding not to launch a program if a match between requirements and resources was not made. Second, the changes recommend an evolutionary approach to developing requirements and making improvements to a system's capabilities. This is substantially different than the historical approach, which sought to deliver all desired capabilities in one "big bang." For example, the F-22 fighter program was justified on the basis of achieving stealth, supercruise propulsion and fused avionics in one-leap with the first product off the production line. But the technologies, and even the funds, were not available to make good on such a promise.

While DOD's policy changes are a good step, implementation has been mixed. There have been some successes with evolutionary acquisitions, but they are exceptional cases in that they required significant and unusual intervention from top leadership in the services and DOD. For example, the Global Hawk and Tactical Unmanned Aerial Vehicle programs—both born from Advanced Concept Technology Demonstrations—have so far

---

been successful in reducing the time it takes to develop and field a new weapon. In the Tactical Unmanned Aerial Vehicle program, the top military acquisition executive met with the head of the user representative's organization, struck an agreement that the product was to be fielded in stages, with the first stage being a very basic system, and then enforced the agreement. The personal involvement of the under secretary of defense for acquisition, technology, and logistics helped set the stage for Global Hawk's evolutionary approach to meeting requirements. In both cases, this top-level intervention allowed requirements to be flexible and gave the product developers parity with the requirements setters in influencing requirements. Equally important, we believe the intervention signaled support for the programs, which eased some of the pressures that normally accompany efforts to get programs approved.

In some of DOD's larger, more complex programs, best practices recommended by the new policy have not been effectively implemented. For example, we recently reported that although the Joint Strike Fighter program has made good progress in some technology areas, the program is at risk of not meeting its affordability objective because critical technologies are not projected to be matured to levels that we believe would indicate a low risk program at the planned start of product development.<sup>16</sup> Earlier this week, we also reported that while the Crusader program has made considerable progress in developing key technologies and reducing its size and weight, it was also likely to enter product development with the majority of its critical technologies less mature than best practices recommend.<sup>17</sup> As stressed in both reports, failure to make sure technologies are sufficiently mature before product development could result in increases in both product and long-term ownership costs, schedule delays, and compromised performance.

---

#### Challenges Still Ahead

New policies will not produce better outcomes unless they influence decisions made on weapon systems. A major challenge ahead for DOD is taking steps necessary to make this happen. Specifically:

---

<sup>16</sup>U.S. General Accounting Office, *Joint Strike Fighter Acquisition: Mature Critical Technologies Needed to Reduce Risks*, GAO-02-39 (Washington, D.C.: Oct. 19, 2001).

<sup>17</sup>U.S. General Accounting Office, *Defense Acquisitions: Steps to Improve the Crusader Program's Investment Decisions*, GAO-02-201 (Washington D.C.: Feb. 25, 2002).

- 
- Programs must be structured so that requirements will not outstrip resources. This means getting requirements-setting organizations to be open to redefining their needs to better match resources available.
  - DOD's funding process must provide assurance to evolutionary programs that the end-state capability will eventually be achieved. This means getting decisionmakers to commit to providing funding for later, more improved versions of a system.
  - The role of the science and technology community must change to accept more responsibility for maturing relevant technologies—without harming DOD's long-term basic research needs. This may require DOD to increase funding and support for science and technology.
  - Measures for success need to be defined for each stage of the development process so that decisionmakers can be assured that sufficient knowledge exists about critical facets of the product before investing more time and money.
  - Responsibility for making decisions must be squarely positioned in those with authority to adhere to best practices and to make informed tradeoff decisions.

Our work in this area continues to take aspects of the best practice framework and look deeper into how specific practices can enhance how weapon systems are developed and managed. We are currently looking at the management of product design and manufacturing and the question of how leading firms reduce total ownership costs of capital equipment.

---

### Additional Ongoing Work of Interest to the Subcommittee

We were also asked to provide updates on our ongoing work related to (1) competition under task- or delivery-order contracts, (2) spare parts price increases, and (3) DOD's use of waivers for certified cost data in negotiating contracts. The following sections highlight our findings and describe ongoing work.

---

#### Competition Under Task- or Delivery-Order Contracts

The government acquires billions of dollars worth of products and services each year using task- or delivery-order contracts—also known as multiple award contracts—that are available for use by all federal agencies. A task- or delivery-order contract provides for an indefinite quantity of supplies or services (within specific limits) to be furnished during a fixed period, with deliveries scheduled through orders with the contractor. There have been persistent concerns that agencies avoid

---

competition when ordering under such contracts. To prevent this from occurring, the Congress, through the Federal Acquisition Streamlining Act,<sup>18</sup> imposed statutory requirements on the use of these contracts. Agencies must now consider awarding multiple contracts rather than a single contract when planning a task- or delivery-order contract. Even with this change, concerns about a lack of competition when ordering under task- and delivery-order contracts have persisted.

In 1998, we examined how multiple award contracts were being administered by six organizations, including several within DOD such as the Defense Information Systems Agency, the Standard Systems Group, and the Electronic Systems Center's Hanscom Air Force Base operations. We found that efforts to promote competition for orders placed under multiple award contracts varied at the six organizations. Two organizations achieved consistent competition for orders under their contracts while four others experienced more difficulty obtaining competition. One organization, for example, issued 64 percent of orders (accounting for 20 percent of dollars awarded) on a sole-source basis through the end of fiscal year 1997. Another organization named preferred vendors in announcements of opportunities, resulting in only one proposal being received on most orders.<sup>19</sup>

In 2000, at the request of this subcommittee, we expanded our review to examine DOD's use of large orders placed under multiple award contracts to acquire IT products and services. We reported that most of the 22 large orders we reviewed had been awarded without competing proposals having been received. Agencies frequently issued orders on a sole-source basis using one of the statutory exceptions to the fair opportunity requirement, and contractors frequently did not submit proposals when provided an opportunity to do so. In most cases, the proposals received involved incumbent contractors.<sup>20</sup>

The DOD Office of the Inspector General (IG) reported in September 2001 that competition was limited for orders under multiple award contracts

---

<sup>18</sup> P.L. 103-355 (Oct. 13, 1994).

<sup>19</sup> U.S. General Accounting Office, *Acquisition Reform: Multiple Award Contracting at Six Federal Organizations*, GAO/NSIAD-98-215 (Washington, D.C.: Sept. 30, 1998).

<sup>20</sup> U.S. General Accounting Office, *Contract Management: Few Competing Proposals for Large DOD Information Technology Orders*, GAO/NSIAD-00-56 (Washington, D.C.: Mar. 20, 2000).



---

DOD organizations administered.<sup>21</sup> According to the IG, contracting offices continued to direct awards to selected sources without providing contractors a fair opportunity to be considered—304 of the 423 orders reviewed had been awarded on a sole-source or directed source basis. As a result, the IG concluded, DOD was not obtaining the benefits of sustained competition and the reduced costs that the Congress envisioned multiple award contracts providing.

Also, since our reviews began, steps have been taken by the executive branch and the Congress to promote broader competition. First, the executive branch revised procurement regulations in June 1999 to prohibit agencies from designating preferred vendors for orders—the practice we had reported on the previous year. Second, the Congress directed, through the National Defense Authorization Act for Fiscal Year 2000,<sup>22</sup> that the procurement regulations be revised to provide guidance on steps agencies should take to ensure contractors are provided a fair opportunity to be considered. An initial revision to the regulations was issued in April 2000 that directed contracting officers to avoid situations where contractors will specialize in one or a few areas within the contract's scope, creating the likelihood that orders in those areas will be awarded on a sole-source basis. The revision directs contracting officers to consider such factors as the scope and complexity of the requirement, the expected duration and frequency of task orders, and the mix of resources a contractor must have to perform expected task-or delivery-order requirements. The revision also changed the requirements for placing individual orders under these contracts. An additional revision to the regulations has been proposed that identifies issues contracting officers should consider when developing ordering procedures for multiple award contracts.

The National Defense Authorization Act for Fiscal Year 2000 directs us to evaluate conformance of the guidance it mandates with existing law. Although the act indicates this guidance should be in place by April 2, 2000, the regulations have not yet been issued in final form. We will initiate the evaluations the act requires once the regulations are finalized, and we look forward to continuing to work with you and your staff on issues related to multiple-award contracting.

---

<sup>21</sup>Office of the Inspector General, Department of Defense, *Multiple Award Contracts for Services* (Sept. 30, 2001).

<sup>22</sup> P.L. 106-65 (Oct. 5, 1999).

## Increases in Spare Part Prices

In recent years, the military services have expressed concern to the Congress that spare part prices have been increasing at a higher rate than inflation and have taken an unanticipated bite out of the limited funds available to meet readiness requirements. Because the planned price changes for spare parts drive the ordering units' budget requests, unexpected price increases could affect their ability to purchase all the parts they need. In response to these concerns, this subcommittee asked us to determine whether spare part prices had been increasing and to identify some of the factors driving the escalation. In 2000, we issued reports on the prices DOD activities paid for Navy-managed aviation reparable parts, consumable spare parts<sup>23</sup> purchased from DLA, and Marine Corps ground system reparable parts.<sup>24</sup> At the request of the subcommittee, we are following-up on our prior work at the Navy and are examining the status of DLA's efforts to address spare part price increases.

Overall, we found that price increases at the Defense organizations we reviewed were high for certain categories of parts. At the Navy, for example, the prices increased an average of 12 percent annually, but parts with high sales volume increased substantially more than parts overall. Results from our ongoing review indicate that these price increases are continuing. At DLA, the annual price change was less than 5 percent for most parts; but for about 14 percent of the parts, price changes were considerably higher, with a very small percentage experiencing price changes of 1,000 percent or more.

Our specific findings at the Navy, DLA, and Marine Corps are described below.

Navy: We found that prices for all Navy-managed aviation parts increased at an average annual rate of 12 percent from 1994 to 1999. However, prices for parts with high sales volume increased substantially more, at an average annual rate of 27 percent. From year to year, there were strong fluctuations in prices, making it difficult for the Navy to project price

<sup>23</sup> Consumable items are those that are consumed in use or discarded when worn out or broken because they cannot be cost-effectively repaired.

<sup>24</sup> U.S. General Accounting Office, *Defense Acquisitions: Prices of Marine Corps Spare Parts Have Increased*, GAO/NSIAD-00-123 (Washington, D.C.: July 31, 2000); U.S. General Accounting Office, *Defense Acquisitions: Price Trends for Defense Logistics Agency's Weapon System Parts*, GAO-01-22 (Washington, D.C.: Nov. 3, 2000); U.S. General Accounting Office, *Defense Acquisitions: Prices of Navy Aviation Spare Parts Have Increased*, GAO-01-23 (Washington, D.C.: Nov. 6, 2000).

---

changes. These fluctuations were largely driven by dramatic swings in the surcharge rate. The lack of stability in prices affects ordering units, which may not have sufficient funds budgeted if unexpected price increases occur. In addition, we reported that the Navy had sought to alleviate concerns about high surcharge rates by moving certain overhead costs from the surcharge rate to the repair cost. This approach merely re-allocated the overhead costs rather than reducing them.

Our follow-on work indicates that prices continue to increase. We will report on reasons for the increases later this year. Our work thus far suggests that the primary reason for the increase is higher material cost associated with repair of the items. Factors we are looking at as drivers for the higher material costs include (1) increased cost of parts ordered from DLA, (2) new, more expensive material being used in the repair process, (3) increased material usage in the repair process, and (4) a change in the mix of parts used in repair.

DLA: We found that from 1989 through 1998, an average of 70 percent of the consumable parts requisitioned by DLA's customers experienced an annual price change of less than 5 percent. However, a relatively small number of parts experienced significant annual price increases; that is, increases of 50 percent or more. The proportion of parts with increases of 50 percent or more had been increasing since 1994, reaching nearly 14 percent in 1998. In addition, a very small percentage of the parts experienced extreme increases in price—1,000 percent or more from one year to the next. These extreme price increases are due to outdated or estimated prices in the catalog that DOD units consult when ordering parts. When the catalog price reflects an outdated or estimated price, ordering agencies experience "sticker shock" when confronted with the actual price of the item, which in some cases is significantly higher than the listed—and anticipated—price.

Since our review, DLA has undertaken a range of efforts to respond to concerns about significant spare part price increases. For example, the agency has recently completed two procurement management reviews concerning price reasonableness determinations and is developing two computer software programs to assist buyers in evaluating contractor-offered prices. These efforts, however, are in various stages of completion and it is too early to assess the results. In March 2001, DLA reported to the secretary of defense on price increases for commercially available spare parts. DLA reported that, from fiscal year 1993 to 2000, materiel costs grew 10.8 percent for competitively purchased commercial items, but increased more than twice as much for noncompetitive purchases. DLA is examining

---

the causes of the price increases and plans to provide the Secretary of Defense with more detailed explanations of cost growth disparities and any remedies. This analysis will be part of DOD's third report to Congress as required in the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999.<sup>28</sup>

Marine Corps: We focused our work on the ground system spare parts that end-users actually procured during fiscal years 1997-99. We found that the prices for these parts had increased at an average annual rate of about 14 percent from 1995-99. Increases in the surcharge rates charged by the Marine Corps were a major cause of the price escalation. We also found that the Marine Corps did not follow DOD pricing regulations in setting prices and that mathematical and computer errors had occurred in price-setting. As a result, the prices of most parts sold to Marine Corps customers were not correct. The Marine Corps has since corrected its prices and implemented a number of corrective actions pertaining to its pricing methodology.

---

**Waiving the Requirement  
for Certified Cost Data in  
Negotiations of Contracts**

To maximize the value of taxpayer dollars, the federal government generally seeks to compete its contracts. However, DOD buys many unique products and services for which it cannot always rely on competitive forces of the marketplace to get fair prices and values. Instead, it must turn to just a few sources or even a sole source for its procurements. Each year, DOD purchases billions of dollars in weapons systems without competition.

In these cases, contractors and subcontractors normally provide the government with cost or pricing data supporting their proposed prices and they certify that the data submitted are accurate, complete, and current. This requirement, established by the Truth-in-Negotiation Act, is meant to put the government on an information parity with sole-source contractors and protect against inflated prices. The act, as amended, specifically provided that the requirements did not apply in "exceptional cases," but it did not include an explanation of what constituted an exceptional case and it has never been amended to define that term. In September 1995, the Federal Acquisition Regulation was amended to allow the head of contracting activities to authorize exceptional case waivers if contracting

---

officers have sufficient information available to negotiate fair and reasonable contract prices without requiring certified data.

Concerned about the waiver process, this subcommittee requested that we look at cases where waivers have been made to identify the circumstances in which the waiver was used and techniques used to negotiate prices in place of requiring certified data. We identified 20 cases in which the requirement for certified data was waived, covering fiscal year 2000 contracting actions of \$5 million or more at six buying activities. The total contract value for which certified data was waived was \$4.4 billion. Contracting officers cited the authority contained in the Federal Acquisition Regulation as the basis for all 20 waivers we reviewed. We are evaluating the agencies' bases for the decisions to waive cost and pricing data. We will be reporting on our findings later this year.

---

This concludes our statement. We appreciate the opportunity to have it placed in the record. If you have questions about our work on service acquisitions and other contracting issues, please call David Cooper at (202) 512-4125, on information technology issues, please call Randolph Hite at (202) 512-3439, and on weapon system issues, please call Katherine Schinasi at (202) 512-4841.

---

## Related GAO Products

---

### Contract Management

*Acquisition Reform: Multiple-award Contracting at Six Federal Organizations.* GAO/NSIAD-98-215. Washington, D.C.: September 30, 1998.

*Acquisition Reform: Review of Selected Best-Value Contracts.* GAO/NSIAD-99-93R. Washington, D.C.: April 14, 1999.

*Best Practices: Taking a Strategic Approach Could Improve DOD's Acquisition of Services.* GAO-02-230. January 18, 2002.

*Contract Management: Few Competing Proposals for Large DOD Information Technology Orders.* GAO/NSIAD-00-56. March 20, 2000.

*Contract Management: Not Following Procedures Undermines Best Pricing Under GSA's Schedule.* GAO-01-125. November 28, 2000.

*Contract Management: Service Contracting Trends and Challenges.* GAO-01-1074R. August 22, 2001.

*Contract Management: Trends and Challenges in Acquiring Services.* GAO-01-753T. May 22, 2001.

---

### Information Technology

*DOD Information Technology: Software and Systems Process Improvement Programs Vary in Use of Best Practices.* GAO-01-116. March 30, 2001.

*DOD Systems Modernization: Continued Investment in the Standard Procurement System Has Not Been Justified.* GAO-01-682. July 31, 2001.

*DOD's Standard Procurement System: Continued Investment Has Yet to Be Justified.* GAO-02-392T. February 7, 2002.

*Information Technology: Architecture Needed to Guide Modernization of DOD's Financial Operations.* GAO-01-525. May 17, 2001.

*Information Technology: DLA Should Strengthen Business Systems Modernization Architecture and Investment Activities.* GAO-01-631. June 29, 2001.

*Information Technology: Inconsistent Software Acquisition Processes at the Defense Logistics Agency Increase Project Risks.* GAO-02-9. January 10, 2002.

---

*Information Technology: Leading Commercial Practices for Outsourcing of Services.* GAO-02-214. November 30, 2001.

*Defense Acquisitions: Collection and Reporting of Information Technology Purchases.* GAO-02-331. January 28, 2002.

---

## Weapon System Acquisition

*Best Practices: A More Constructive Test Approach Is Key to Better Weapon System Outcomes.* GAO/NSIAD-00-199. July 31, 2000.

*Best Practices: Better Management of Technology Development Can Improve Weapon System Outcomes.* GAO/NSIAD-99-162. July 30, 1999.

*Best Practices: Better Matching of Needs and Resources Will Lead to Better Weapon System Outcomes.* GAO-01-288. March 8, 2001.

*Best Practices: Commercial Quality Assurance Practices Offer Improvements for DOD.* GAO/NSIAD-96-162. August 26, 1996.

*Best Practices: DOD Can Help Suppliers Contribute More to Weapon System Programs.* GAO/NSIAD-98-87. March 17, 1998.

*Best Practices: DOD Training Can Do More to Help Weapon System Programs Implement Best Practices.* GAO/NSIAD-99-206. August 16, 1999.

*Best Practices: Successful Application to Weapon Acquisitions Requires Changes in DOD's Environment.* GAO/NSIAD-98-56. February 24, 1998.

*Defense Acquisition: Best Commercial Practices Can Improve Program Outcomes.* GAO/T-NSIAD-99-116. March 17, 1999.

*Defense Acquisition: Employing Best Practices Can Shape Better Weapon System Decisions.* GAO/T-NSIAD-00-137. April 26, 2000.

*Defense Acquisition: Improved Program Outcomes Are Possible* T-NSIAD-98-123. March 18, 1998.

*Defense Acquisitions: Steps to Improve the Crusader Program's Investment Decisions.* GAO-02-201. February 25, 2002.

*Joint Strike Fighter Acquisition: Mature Critical Technologies Needed to Reduce Risks.* GAO-02-39. October 19, 2001.

---

## Pricing Issues

*Defense Acquisitions: Prices of Navy Aviation Spare Parts Have Increased.* GAO-01-23. November 6, 2000.

*Defense Acquisitions: Price Trends for Defense Logistics Agency's Weapon System Parts.* GAO-01-22. November 3, 2000.

*Defense Acquisitions: Prices of Marine Corps Spare Parts Have Increased.* GAO/NSIAD-00-123. July 31, 2000.

---

## Additional GAO Reports

*High Risk Series: An Update.* GAO-01-263. January 2001.

*Major Management Challenges and Program Risks: Department of Defense.* GAO-01-244. January 2001.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR DANIEL K. AKAKA

SPIRAL DEVELOPMENT PROGRAMS

1. Senator AKAKA. Mr. Wynne, how do you define spiral development programs? Are spiral development programs the same as, or different from, incremental or evolutionary acquisition programs?

Mr. WYNNE. Evolutionary acquisition refers to an acquisition strategy that defines, develops, produces, acquires, or fields an initial hardware or software increment (or block) of operational capability based on mature technologies, time-phased requirements, and demonstrated manufacturing or software deployment capabilities in a short period of time, followed by subsequent increments of capability over time allowing for full and adaptable systems over time. Each increment will meet a militarily useful capability specified by the user (i.e., at least the thresholds set by the user for that increment); however, the first increment may represent only 60 percent to 80 percent of the desired final capability.

There are two basic approaches to evolutionary acquisition. In one approach, the ultimate functionality can be defined at the beginning of the program, with the content of each deployable increment determined by the maturation of key technologies. In the second approach, the ultimate functionality cannot be defined at the beginning of the program, and each increment of capability is defined by the maturation of the technologies matched with the evolving needs of the user.

An increment or block is a militarily useful and supportable operational capability that can be effectively developed, produced or acquired, deployed, and sustained. Each increment of capability will have its own set of thresholds and requirements set by the user.

Spiral development is an iterative process for developing a defined set of capabilities within one increment, providing opportunity for interaction between the user, tester, and developer to refine the requirements through experimentation and risk management, provide continuous feedback, and provide the best possible capability within the increment. Each increment may include a number of spirals. For example, software may be developed and released in a spiral fashion a number of times within a single block or increment.

2. Senator AKAKA. Mr. Wynne, how does the Department intend to budget for these programs—that is, if a program is started with time-phased requirements and a block approach to full capability, will each block be treated as a separate program with each subsequent block being funded fully and separately?

Mr. WYNNE. Yes, that is correct. Each increment or block will be fully and separately funded as early as possible, but in no case later than when the start of development for that increment or block is projected to occur in the first 2 years of the Future Years Defense Plan (FYDP) under review. Multiple increments or blocks may be funded simultaneously in the same program element. In all cases, each increment must be justified and supported by the capabilities provided over time.

3. Senator AKAKA. Mr. Wynne, how will deliverables be defined?

Mr. WYNNE. Each increment or block will meet a militarily useful capability specified by the user through the definition of time-phased requirements. In an evolutionary acquisition approach; each block shall have a set of parameters with thresholds and objectives specific to that block.

4. Senator AKAKA. Mr. Wynne, product developers in the private sector have used knowledge based criteria and metrics for technology maturity, design maturity, and manufacturing capability to ensure that development cycle-times stay short. Does the Department of Defense plan to incorporate similar demonstration metrics and standards to support decisions at each key point in a program? (Examples might include technology readiness levels to prove technology readiness before starting, completed prototypes and engineering drawings to demonstrate design maturity before making a production decision.)

Mr. WYNNE. Our new acquisition model provides for a clear definition between technology work and systems work, a technology demonstration before beginning systems-level work, and a full systems demonstration before committing to low-rate production. Our revised acquisition process (as defined in DODI 5000.2) also mandates entrance criteria that must be met before approval may be given to enter System Development and Demonstration (SDD). Entrance into SDD is dependent on three key things: technology (including software) maturity, validated requirements, and funding. Unless some other factor is overriding in its impact, the maturity of the technology will determine the path to be followed. Additionally, in order to enter the production and deployment phase, a program must demonstrate technology maturity (with an independent technology readiness assessment), system and relevant mission area (operational) architectures, mature software capability, demonstrated system integration or demonstrated commercial products in a relevant environment, and no significant manufacturing risks.

5. Senator AKAKA. Mr. Wynne, how will the new spiral development and evolutionary acquisition processes improve the prospects of getting more interoperability into our weapon systems?

Mr. WYNNE. All acquired systems shall be interoperable with other U.S. and allied defense systems, as defined in the specific requirements and interoperability documents. The program manager must describe the treatment of interoperability requirements. In an evolutionary acquisition including successive blocks satisfying time-phased requirements, this description must address each block, as well as the transitions from block to block. This description must also identify enabling system engineering efforts such as network analysis, interface control efforts, open systems, data management, and standardization. The strategy must also identify related requirements or constraints (e.g., treaties or international standardization agreements) that impact interoperability requirements (e.g., standards required by the DOD Joint Technical Architecture or the systems, forces, units, etc. for which interoperability is at, or could be at issue), and any waivers or deviations that have been obtained or are anticipated being sought.

6. Senator AKAKA. Mr. Wynne, how will you address the problem of having multiple variants of the same platform in service at the same time?

Mr. WYNNE. Having multiple variants of the same platform in service at the same time is neither a new nor unique condition resulting from spiral development. This situation normally occurs with the updating and modernization of systems where it is prohibitive in terms of cost or time to update all operational platforms to the same configuration. This is a normal fact of life in acquiring systems. However, the use of spiral development concepts, based on open interface standards, actually improves the situation since improvements/upgrades are planned up-front with the associated funding in place. By developing precisely defined capabilities within each variant, while having a grand plan for evolution of the platform configurations, there are fewer unknowns in the process, complexity within each variant is reduced, risks of obsolescence are mitigated, and the variants can have greater commonality within technology evolution. This approach will, therefore, reduce overall lifecycle costs of the system.

7. Senator AKAKA. Mr. Wynne, will this process emphasize open systems as an alternative to unique, proprietary systems? If so, is there a downside to open systems architecture in terms of security?

Mr. WYNNE. The use of an open systems approach is a fundamental tenet of our acquisition policy for all systems. Open systems are a vital enhancer of spiral development, both in terms of providing architecture for change, risk reduction, obsolescence mitigation, and reduced complexity as well as providing a framework for affordability.

To ensure that weapon systems meet security requirements, these requirements need to be properly levied on programs up-front. This must be followed by an appropriate systems engineering process to assure that the resulting systems meet the security requirement. This is the case whether or not open systems and spiral development techniques are involved. Blanket adherence to the use of open interfaces/products without proper systems engineering is a sure fire prescription for developing a system that does not meet security requirements.

For certain mission critical applications, open system architectures can be applied, but certain critical elements must be carefully evaluated. Special versions or interface extensions of these elements may be necessary in order to provide the additional requisite trust and assurance. These versions can involve additional security functionality and evaluation levels as directed in the National Institute of Standards Common Criteria. Many commercial grade products do not go through a rigorous evaluation and certification process, and hence, may not provide the level of trust desired for mission critical applications. Therefore, the systems engineering process is the fundamental key to success.

8. Senator AKAKA. Mr. Wynne, in the past, requirements setters have been reluctant to develop operational requirements for systems in a phased approach because they didn't trust that later blocks would get funded and eventually deployed, thereby leaving the military commands short of their full objective. Instead, they pushed the one step process in weapon system development, accepting significant technological risk just to ensure the program gets started. How will the Department of Defense change this attitude and create trust in the military commands so they can make legitimate attempts to employ the evolutionary approach and time-phased requirements to achieve the long-term goals of the military command?



Mr. WYNNE. It's true that the ability to take full advantage of the evolutionary acquisition approach requires support by both the requirements community and the acquisition community. However, the Department has already taken several important steps toward that cultural shift. "Requirements generation" policy emphasizes the use of time-phased requirements (increments of militarily useful capability) as our acquisition policy emphasizes the use of evolutionary acquisition. We have developed programs using an evolutionary acquisition approaches. Recent examples of programs utilizing both time-phased requirements and evolutionary acquisition strategies include Global Hawk, Theater Medical Improvement Program, and DOD Teleport. Finally, both the requirements generation community and the acquisition community recognize the need to get advanced technology to the warfighter faster, particularly when the technology cycle is so short.

9. Senator AKAKA. Mr. Wynne, traditionally, there has been a disconnect between DOD's science and technology and acquisition communities. The technologies that are required at the outset of an acquisition program are often very immature, sometimes only conceptual. In a new evolutionary acquisition process that demands speed of development, technologies will have to be ready for product development and will have to be managed much more closely. How does the Department of Defense plan to do this?

Mr. WYNNE. Evolutionary acquisition is premised on the use of mature technologies to shorten the development time and speed fielding of systems. Although they may be part of overall program planning, technologies that require further maturation will be inserted when appropriate and when risk is deemed acceptable. Our approach to manage this process includes the use of technology readiness assessments, which will be conducted by the science and technology community. This approach also addresses the disconnect you mention by requiring an increased collaboration and communication between the science and technology and acquisition communities.

10. Senator AKAKA. Mr. Wynne, research of technology development practices indicates that \$1.00 spent discovering something in technology development can save as much as \$10,000 during production development. Because of this, successful firms in the private sector have found that it is beneficial to keep technology out of the product development process until it can be demonstrated to work in an operational environment. Do you agree?

Mr. WYNNE. Technology demonstrated in an operational environment is preferable; however, that is not always feasible in defense systems. Our current acquisition documents state that "technology must be demonstrated in a relevant environment or, preferably, in an operational environment to be considered mature enough to use for product development in system integration." The Director, Defense Research and Engineering is responsible for evaluating the technology readiness assessments conducted by the services and advising the Defense Acquisition Board on the feasibility to move forward with the current planned technology.

11. Senator AKAKA. Mr. Wynne, Advanced Concept Technology Demonstrations (ACTDs) seem to hold a promise as a way to transition technologies to products. The acquisition process does not specify the role of ACTDs in the acquisition process beyond a simple description. Can you define the role that ACTDs, currently funded and managed by science and technology (S&T) organizations, should play in this new evolutionary acquisition process? For example, will any major acquisition be required to graduate from an ACTD?

Mr. WYNNE. There will not be a future or present major acquisition program required to "graduate" from an ACTD. We have had major acquisition programs result from past ACTDs, as exemplified by the Global Hawk and Predator ACTDs. ACTDs are a transformational process designed to address immediate and compelling needs of the Commanders in Chiefs and services. A major part of an ACTD is to define a concept of operations of a proposed solution from emerging technologies and provide a residual for the warfighter. The services decide to transition the products of an ACTD through their Program Objective Memorandum process and support the residuals through operations and maintenance funding following the formal ACTD period.

12. Senator AKAKA. Mr. Wynne, while new policy statements embrace the concept of spiral development and evolutionary acquisition, the Department has supported decisions in the past year for the Joint Strike Fighter and Crusader programs to proceed to the next acquisition, even though they did not demonstrate full maturity in all of the technologies to meet existing requirements. What is different about

those decisions compared with decisions that preceded the concept of spiral development and evolutionary acquisition?

Mr. WYNNE. Our acquisition policies recognize there is more than one way to develop and deploy systems. While our preferred approach is to use evolutionary acquisition, we can take a single step to full capability when that is appropriate. The decision on the Joint Strike Fighter (JSF) program illustrates the value of flexibility in developing an acquisition strategy. Regardless of approach, the JSF had to mature its technologies to the appropriate level prior to entering the next acquisition phase.

For the JSF program, the Under Secretary of Defense (Acquisition, Technology, and Logistics) approved an evolutionary acquisition strategy. Pursuant to that approach, the Deputy Under Secretary of Defense, Science and Technology (DUSD(S&T)), conducted an independent technology readiness assessment of the JSF program per Department of Defense Instruction 5000.2, "Operation of the Defense Acquisition System," October 23, 2000. In the assessment, DUSD(S&T) concluded the maturity of the block 1 JSF program was sufficient to warrant entry into the system development and demonstration (SDD) phase. As subsequent technologies mature, they will be included in later blocks.

The JSF program office has implemented its acquisition strategy consistently. The program office has identified, baselined, and tracked risks, documenting the specific events required to reduce the risk associated with critical technologies, processes, and system characteristics to an acceptable level prior to the beginning of SDD.

Since the Secretary of Defense has recommended to Congress that the Crusader's funds be redirected, it is probably not a good program to discuss in terms of spiral development and evolutionary acquisition.

13. Senator AKAKA. Mr. Wynne, an acquisition process should provide guidance in the form of milestones, measurements, and markers for success as a program progresses. As you move toward spiral development and evolutionary acquisition, what changes do you see in these areas? Will each block or increment of a spiral development or evolutionary acquisition program go through the same milestones specified in the Department's current regulation?

Mr. WYNNE. Our evolutionary acquisition process is defined in DOD Directive 5000.1 and DOD Instruction 5000.2. Our process calls for each increment or block of capability to have a set of requirements and an acquisition program baseline in order to proceed through its development milestones, and to have an assessment of capability prior to fielding. An evolutionary acquisition strategy must define: the first block of capability and how it will be funded, developed, tested, produced, and supported; the full capability the evolutionary acquisition is intended to satisfy, and the funding and schedule planned to achieve the full capability to the extent it can be described; and the management approach to be used to define the requirements for each subsequent block and the acquisition strategy applicable to each block, including whether end items delivered under earlier blocks will be retrofitted with later block improvements.

14. Senator AKAKA. Mr. Wynne, the Department of Defense has invested significant time and energy into its "Total Ownership Cost" initiative that is aimed at reducing the overall life cycle cost of weapon systems. How can the concept of spiral development or evolutionary acquisition enable better control over total ownership costs? Isn't there a risk of increased logistics costs associated with maintaining multiple variants of the same platform from different phases or an incremental program?

Mr. WYNNE. We have been pleased with the progress that we have achieved with the Reduction in Total Ownership Costs (R-TOC) program. We feel that our Evolutionary Acquisition initiative will further aid in reducing Total Ownership Costs (TOC). Virtually every piece of equipment in the field has multiple variants of the same platform, because units were produced over a period of time and during that production period parts became obsolete or were replaced by newer and better technologies. This has happened within models of the same type as well as different models of a weapons system. The tendency in recent years to reduce yearly quantities and stretch out production over a greater number of years has only served to magnify this trend.

Our evolutionary acquisition initiative should assist in reversing this trend by allowing us to field new equipment sooner than would otherwise occur if we had to wait for a new technology to become fully developed before it was fielded or if we waited until full capability had been achieved. We will field new equipment as it provides sufficient capability to meet our requirements at that time and not have to wait until a new technology has fulfilled all of its potential. Earlier fielding of

the new equipment will allow us to retire old equipment sooner and thus get rid of obsolete and frequently maintenance intensive weapons fielded in multiple variants and configurations. The new systems will be less maintenance intensive than the systems replaced because of our initiatives to reduce total ownership costs and because newer technology allows us to improve the reliability, durability, and maintainability of the equipment, just as newer television sets are vastly more reliable than the old tube-type sets and new automobiles require much less scheduled maintenance than their predecessors.

Evolutionary acquisition will also allow us to plan improvements and technology insertions in a well thought out and more orderly process that should minimize the number of changes in equipment and number of variants compared with what we have seen in the past.

Evolutionary acquisition should also allow us to reduce the number of variants because as each succeeding cycle of the evolutionary approaches, the previous systems are to be upgraded to the latest version, thus keeping all of a weapon system at the same level of capability. Each succeeding evolutionary cycle will also allow us to solve maintenance problems identified in the earlier versions of the system.

In summary, we feel evolutionary acquisition will allow us to minimize logistics costs by our current emphasis on reducing total ownership costs, by allowing earlier fielding of newer technology systems with better maintenance built into them, and by minimizing the number of variants in the field through a better and more orderly planning process.

#### ACQUISITION CULTURE

15. Senator AKAKA. Mr. Wynne, the Department of Defense has indicated that it has a goal of limiting product development cycle times to 5 to 7 years. Do you believe that is achievable in the current DOD acquisition culture? If so, when can we expect to see concrete results?

Mr. WYNNE. The average development cycle time (i.e., program initiation to initial operational capability) for DOD major weapons programs started before fiscal year 1992 was 132 months (11 years). The average development cycle time for major weapons programs started since fiscal year 1992 has decreased to 95 months (7.9 years). The Department's goal for program new starts after fiscal year 2001 is 66 months (5.5 years). Although this goal is ambitious, we believe that the implementation of the new Defense Acquisition System (5000 Series) will keep us on a concrete trend toward this goal.

A key focus of the 5000 Series policy is to deliver advanced technology to the warfighter faster through: (1) rapid acquisition with demonstrated technology; (2) time-phased requirements and evolutionary development; and (3) integrated test and evaluation. The new acquisition model is based on achieving proven technology and having a validated operational requirements document before beginning systems-level work at milestone B. It would also complete full systems demonstration before committing to low-rate production (milestone C).

Evolutionary acquisition based on time-phased requirements is the preferred approach, not a "non-traditional" excursion, under our new acquisition model. Early, upfront involvement of the test community in the requirements process and design of an integrated test strategy is emphasized. Test and evaluation approaches for evolutionary (spiral) developments will have to be adapted.

These major tenets of the 5000 Series are intended to reduce the acquisition cycle times of DOD weapons systems and achieve the long term goal of 66 months for post-fiscal year 2001 programs. It will take several years (approximately 5) before the post-fiscal year 2001 program sample provides a statistically significant "average."

#### NUNN-MCCURDY

16. Senator AKAKA. Mr. Wynne, the Nunn-McCurdy legislation requires the reporting of a program's development schedule, procurement schedule, and testing plans as well as its estimated cost. Do you receive appropriate information in each of these areas to ensure that programs are performing as they should? Do you believe that any additional information is needed?

Mr. WYNNE. The Department reviews Major Defense Acquisition Programs (MDAPs) periodically to assess actual program performance against the program's planned schedule and testing plans as well as its estimated cost. This information is evaluated to ensure that the program is meeting cost, schedule, and performance goals, as agreed to by the program manager, service acquisition executive, and the

milestone decision authority. This intensive review provides an appropriate level of information to determine whether programs are performing as expected. Additional program information is not needed.

#### SPACE-BASED INFRARED RADAR SYSTEM-HIGH

17. Senator AKAKA. The Space Based Infrared Radar System, High Component (SBIS-High) program has experienced billions of dollars of cost growth, and is 4 to 5 years behind its original schedule. As a result, the Air Force set up an independent review team to assess the corrective actions required to get the program back on track. Are you confident that you know whether any other major DOD programs are experiencing similar problems? If not, how will you find out?

Mr. WYNNE. Our program managers (PMs) are required to provide periodic reports via the Defense Acquisition Executive Reporting System (DAES). These reports require input from the PM regarding progress in regard to cost, schedule, and performance. In turn, the PM's report is reviewed by the service acquisition executive and independently assessed by the Office of the Secretary of Defense staff. Differences of view are highlighted. Where those differences are significant, we schedule the program for formal review and, where required, direct remedial action. This approach has proven effective over time and, I believe, will provide us with advance warning of problems similar to those encountered by SBIR-High.

18. Senator AKAKA. How will you ensure that the lessons learned from SBIRS-High are applied to all major DOD programs?

Mr. WYNNE. The Defense Acquisition University has an active program to capture lessons learned from our acquisition programs. We incorporate those lessons in the curriculum for our workforce and intensively consider them as case studies in our senior management courses. We also have multiple outreach and communications media such as websites, the "acquisition deskbook," and electronic magazines to disseminate lessons learned to our workforce. I should add that the term "lessons learned" is usually interpreted to mean a negative experience. It is equally important to capture and share the positive lessons from initiatives that contributed to the success of many of our programs.

#### COST ANALYSIS AND IMPROVEMENT GROUP

19. Senator AKAKA. Mr. Wynne, a number of press reports state that the Pentagon has adopted cost estimates developed by the independent Cost Analysis and Improvement Group (CAIG), rather than estimates from the services, as the basis for program budgets. Could you please explain the Department's current policy for costing its major weapon systems, and the rationale for it?

Mr. WYNNE. Each major weapon system program must be fully funded to a reasonable cost estimate. We have found that CAIG estimates tend to be more realistic than program office estimates and the Secretary has stated we will use CAIG estimates as a guide to ensure programs are fully funded.

This policy is not unprecedented. For example, one of the "Carlucci Initiatives" adopted by Secretary Weinberger in 1981 was to realistically fund major acquisition programs.

20. Senator AKAKA. Mr. Wynne, does the CAIG have access to the program cost data that it needs to make reliable, independent cost estimates?

Mr. WYNNE. I believe the CAIG does have the access to program cost data it requires. The CAIG is the judge of its own data requirements and has the standing to raise issues associated with denial of access or unavailability of data to the Under Secretary of Defense for Acquisition, Technology, and Logistics.

There is, however, further work to be done on improving the systems used to capture and utilize historical information on costs. To this end, we are continuing initiatives associated with Contractor Cost Data Reports, and improvements in visibility and management of operating and support cost (VAMOSC) information. We also have undertaken new initiatives to improve reporting of software cost data metrics and to improve warehousing and accessibility of cost information.

21. Senator AKAKA. Mr. Wynne, is the CAIG staffed adequately to properly perform its new responsibilities?

Mr. WYNNE. The CAIG recently requested a modest increase in CAIG staffing and initiated a staffing study that will involve the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, as well as other offices of the DOD.

The study will analyze CAIG manning in light of recent changes to both the volume of workload and senior management expectations of the CAIG. That study should be completed in approximately 3 months.

#### SPACE PROGRAMS

22. Senator AKAKA. Mr. Wynne, Under Secretary Aldridge recently signed a memorandum delegating the oversight of space programs to the Under Secretary of the Air Force. In view of this delegation, how will you ensure the appropriate “jointness” of military space programs?”

Mr. WYNNE. In recognition of the importance of space to the other services, the Secretary of the Air Force has already taken initial steps to help ensure the “jointness” of military space programs.

The primary focal point for development and acquisition of space systems will be the Under Secretary of the Air Force/Director National Reconnaissance Office (USecAF/DNRO). Formal steps have been taken to include other services in the space development and acquisition processes. The National Security Space Architect (NSSA) was realigned under the USecAF/DNRO. The office of the NSSA includes personnel from other services/agencies, who will be able to bring their home service/agency perspective to the performance of NSSA duties. The NSSA will also include a Senior Advisory Group, which will include representatives from other services/agencies, and will provide a forum to introduce other service/agency concerns.

The Secretary of the Air Force has invited the other services to place officers within the USecAF staff, in positions which will be mutually agreed upon. This will allow other services to have insight into the Air Force’s implementation of Executive Agency of Space, as well as to shape decisions for the good of the entire DOD space programs.

Although the Air Force has milestone decision authority for space programs, the other services/agencies are invited to participate in the program review efforts as each major program meets its acquisition milestone or key decision points. This will enable the other services to evaluate space systems against documented requirements from their individual Service. All of these processes are intended to make Air Force implementation of Space Executive Agency a transparent and involved process for the other services.

23. Senator AKAKA. Mr. Wynne, will Under Secretary Aldridge continue to provide oversight for these programs? If so, in what way?

Mr. WYNNE. The Department has taken steps to ensure adequate oversight of the actions of the Under Secretary of the Air Force as the Executive Agent and Milestone Decision Authority for DOD space programs. Although the Air Force has milestone decision authority for space programs, the other services/agencies are invited to participate in the program review efforts as each major program meets its acquisition milestone or key decision points. The memorandum delegating Milestone Decision Authority to the Air Force was specific in ensuring that the Office of the Secretary of Defense (OSD) would be informed of any waivers and exceptions Under Secretary of the Air Force decides to make to established acquisition regulations. Delegation of milestone decision authority does not change space-related responsibilities or statutory authorities of OSD. The OSD Cost Analysis Improvement Group, the OSD CAIG, which reports on acquisition programs, will continue to prepare independent cost estimates for the space Major Defense Acquisition Programs. Likewise, the OSD Director of Operational Test and Evaluation (OSD/DOT&E) who oversees all operational testing to be conducted in connection with a major defense acquisition program, will continue to independently review, approve, and oversee the execution of operational test plans and programs for space Major Acquisition Programs. The Under Secretary of the Air Force is to report to OSD after completion of the Air Force/National Reconnaissance Office “best practices” review with regard to further space acquisition streamlining being contemplated. All of these processes are intended to make Air Force implementation of Space Executive Agency a transparent and involved process for OSD and the services.

The Department has taken steps to improve the oversight of the level of funding and personnel resources provided for space programs. The Department has established a “virtual” Major Force Program for Space to increase the visibility of all fiscal resources the Department allocates to space activities. Working with the Comptroller, we have established a Virtual Major Force Program for Space that includes about 180 Program Elements grouped into Space Control, Space Force Application, Space Force Enhancement, Space Support, and Other Space. Included in the “virtual” Major Force Program for Space are RDT&E, systems, user equipment, people,

organizations, and infrastructure whose primary/dedicated mission is space or a space related ground system. The “virtual” Major Force Program for Space identifies program elements from the Air Force, Army, Navy, National Reconnaissance Office, Missile Defense Agency, Defense Information Systems Agency, and Defense Advance Research Project Agency.

---

QUESTIONS SUBMITTED BY SENATOR JAMES M. INHOFE

SPIRAL DEVELOPMENT PROGRAMS

24. Senator INHOFE. Mr. Wynne, DOD regulation states, “Technology Readiness Levels (TRLs) enable consistent, uniform, discussions of technical maturity, across different types of technologies. Decision authorities shall consider the recommended TRLs (or some equivalent assessment methodology) when assessing program risk.” Does the 5000 series mandate that all weapons systems programs implement the TRL methodology?

Mr. WYNNE. Emphasis on technical maturity is a key component of our revised acquisition process. As the level of technology maturity is a principal element of program risk, it is important for the Department to be able to measure the degree to which proposed critical technologies meet program objectives. However, the 5000 series does not mandate the use of TRLs. The key point is that an appropriate (TRL or equivalent) technology readiness assessment be conducted to examine program concepts, technology requirements, and demonstrated technology capabilities to determine technological maturity.

25. Senator INHOFE. Mr. Wynne, is it DOD’s policy that all weapons programs must achieve TRL 7 prior to entering Systems Design and Development (SDD)?

Mr. WYNNE. No. TRLs are a necessary and useful input to the decision making process, but they are not sufficient alone in determining decision points and when to transition technologies into weapon systems. The acquisition strategy should be developed in consonance with the technology transition or insertion strategy. Total ownership costs and other considerations, coupled with urgency based on threat assessments, must also be taken into account in the decision making process.

26. Senator INHOFE. Mr. Wynne, based on TRL methodology, is the Department of Defense eliminating their emphasis on the importance of modeling and simulation?

Mr. WYNNE. No. TRLs provide a common language for evaluating technologies and give the decision makers a relative measure of maturity. Modeling and simulation (M&S), on the other hand, is a tool, useful throughout the acquisition process, for understanding the performance and feasibility of subsystems, a system or systems. M&S allows us to immerse systems and concepts in environments that would otherwise not be cost effective or possible with physical representations. There is no decrease in our emphasis on M&S, and in fact, our technology readiness assessments may increase the use of M&S.

27. Senator INHOFE. Mr. Wynne, will programs be required to produce additional prototypes in order to comply with the TRL process?

Mr. WYNNE. The need and extent of prototyping is a function of a specific program’s acquisition strategy or a broader need to demonstrate technologies that may have more general application. In both cases, the intent is to understand technology and mitigate risk as well as reduce cost. TRLs are a way of expressing technological maturity. Their use does not require any more or any less prototyping, but may be used to express the outcome or desired outcome of a prototyping effort.

28. Senator INHOFE. Mr. Wynne, is the intent of the TRL methodology to reduce the program’s risk level specifically from high to low? If so, is DOD’s policy that all weapons programs must be “low risk” in order to enter SDD?

Mr. WYNNE. The maturity of technology is a component of a program’s overall risk determination. The purpose of TRLs is to measure the maturity of technologies. Using TRLs will not reduce risk, but it will provide useful information for the acquisition and the science and technology communities as well as the decision makers regarding the level of technological maturity. In general, our policy is to reduce risk to a manageable level, but also to seek a balance between all programmatic factors—cost, performance, and schedule.

## QUESTIONS SUBMITTED BY SENATOR RICK SANTORUM

## SPIRAL DEVELOPMENT

29. Senator SANTORUM. Mr. Wynne, please explain briefly the difference between the Department of Defense's new concept of "spiral development" and the traditional block modification practices where increased capabilities are added with advances in technology.

Mr. WYNNE. The primary difference between spiral development and the traditional block modification practices is in the way that the user's requirements are addressed. The spiral development process refers to an acquisition strategy that defines, develops, produces or acquires, and fields an initial hardware or software increment (or block) of operational capability based on mature technologies, time-phased requirements, and demonstrated manufacturing or software deployment capabilities in a short period of time, followed by subsequent increments of capability over time allowing for full and adaptable systems over time. Each increment will meet a militarily useful capability specified by the user (i.e., at least the thresholds set by the user for that increment); however, the first increment may represent only 60 percent to 80 percent of the desired final capability.

There are two basic approaches to spiral development. In one approach, the ultimate functionality can be defined at the beginning of the program, with the content of each deployable increment determined by the maturation of key technologies. This approach has some similarities to the traditional block modification practices. In the second approach, the ultimate functionality cannot be completely defined at the beginning of the program, and each increment of capability is defined by the maturation of the technologies matched with the evolving needs of the user. This approach is particularly common with our information technology (IT) systems. We can provide militarily useful capability to meet current threats in significantly shorter development/deployment cycle times.

## VETERAN-OWNED BUSINESSES

30. Senator SANTORUM. Ms. Styles, what is being done to ensure that all DOD solicitations, and all contracts used by DOD entities, such as the General Services Administration scheduled, identify the procurement goals for veteran-owned businesses?

Ms. STYLES. DOD small business specialists are responsible for reviewing all DOD acquisitions over \$10,000 for small business opportunities, including opportunities for veteran-owned and service-disabled veteran-owned small businesses to contract with DOD or perform subcontracted work under DOD contracts. With regard to subcontracting opportunities, DOD contracting officials are required by Federal Acquisition Regulation (FAR) Subpart 19.7 to include in their contracts a requirement that any contractor receiving a contract for more than the simplified acquisition threshold give small businesses, including veteran-owned and service-disabled veteran-owned small businesses, maximum practicable opportunity to participate in contract performance consistent with efficient performance. For acquisitions that meet the statutory thresholds, DOD contracting officials are required to include in their contracts small business subcontracting plans that include separate percentage goals for using veteran-owned and service-disabled veteran-owned small businesses. Also, as part of their duties under the Small Business Act and applicable acquisition regulations, DOD small business specialists and DOD Offices of Small and Disadvantaged Businesses recommend small business goals for individual acquisitions as well as overall procurement goals for DOD offices. The Under Secretary of Defense for Acquisition, Technology, and Logistics (USD (AT&L)) issued a Small Business Re-invention Initiative in May 2001 that emphasizes the importance of, and holds senior leadership accountable for, small business performance improvements.

## QUESTIONS SUBMITTED BY SENATOR SUSAN COLLINS

## CONTRACT BUNDLING AND CONSOLIDATION

31. Senator COLLINS. Ms. Lee and Ms. Styles, Subtitle B of the Small Business Reauthorization Act of 1997 (P.L. 105-135) speaks to the small business procurement opportunities program, and more specifically, section 411 through 413 defines and lays out procurement considerations for contract bundling. With this in mind, please explain what the current DOD policy is on contract bundling.

Ms. LEE. DOD complies with the Federal Acquisition Regulation (FAR) coverage that implements the statutory provisions on contract bundling that were added to

the Small Business Act by sections 411 through 413. In addition, on January 17, 2002, the Under Secretary of Defense for Acquisition, Technology, and Logistics issued a policy memorandum on contract consolidations, including contract bundling, that provided additional guidance to Department acquisition personnel. In those instances where contract bundling is deemed to be necessary and justified, in accordance with the regulations, it is DOD policy that acquisition planners take efforts to mitigate the negative impact contract bundling has on small business concerns.

A Benefit Analysis Guidebook was distributed with the memorandum. This Guidebook was developed to assist acquisition planners in determining whether the benefits from a bundled contract are "measurably substantial" prior to proceeding with the acquisition. The Guidebook also provides information on methods to avoid bundling.

Ms. STYLES. In her statement Dee Lee stated DOD policy on contract bundling. I have nothing to add to that statement.

32. Senator COLLINS. Ms. Lee and Ms. Styles, contract bundling has a negative connotation in the field among small- and mid-sized firms. In fact, contract bundling is seen as having a significant and negative effect on small- and mid-sized businesses. A U.S. Small Business Administration report dated September 2000 states that for every increase of 100 bundled contracts, there was a decrease of more than 106 individual contracts awarded to small firms. What safeguards or reforms are underway to ensure that small businesses get the opportunity to continue to play a critical role in supporting DOD's mission and contribute to the strength of the U.S. industrial base?

Ms. LEE. First, I would like to note that the referenced Small Business Administration report used a definition of contract bundling that differed from the definition added to the Small Business Act by section 412 of the Small Business Reauthorization Act of 1997. DOD recognizes it is in the long term best interests of the Department to ensure that we structure requirements to facilitate small business participation to the maximum extent practicable.

The Under Secretary of Defense for Acquisition, Technology, and Logistics, USD(AT&L), issued a Small Business Reinvention Initiative in May 2001 that emphasizes the importance of, and holds senior leadership accountable for, small business performance improvements. Additionally, USD(AT&L) recently issued a memorandum outlining expectations regarding contract consolidations and bundling. Our objective is to ensure that we are developing acquisition strategies based on sound business decisions, including the survivability of a competitive industrial base.

Ms. STYLES. The President has a strong interest in this area. On March 19, 2002, the President announced his Small Business Agenda, a plan to help create an environment where small businesses can flourish. Included in the President's plan are proposals to improve access to government contracting opportunities for small businesses. The President instructed the Director of the Office of Management and Budget to prepare a strategy for unbundling contracts, where practicable. To help carry out the President's agenda, my office formed two inter-agency working groups, one focusing on competition and the other focusing, on contract bundling issues. The contract bundling working group is preparing a report to present to the President that will provide a strategy for unbundling contracts where practicable and recommendations to implement that strategy.

33. Senator COLLINS. Ms. Lee and Ms. Styles, contract consolidation seems to be used more and more by the DOD. Would you explain to me the DOD's interpretation of contract consolidation and the pros and cons associated with this contracting approach?

Ms. LEE. We utilize the term "contract consolidation" to refer to the combination or other aggregation of several previous contracts or requirements into a single larger contract. The Small Business Act definition of a bundled contract is a subset of a consolidated contract. It includes only those contracts for requirements that were previously performed by or suitable for award to small businesses, but that no longer are likely to be suitable for award to a small business concern as a result of the consolidation.

Contract consolidations can produce quantity cost savings, reduce cycle time, improve customer service, eliminate duplication, make more efficient use of existing resources, and simplify government administration. Contract consolidations come under scrutiny when companies, whether large or small business, that previously performed as prime contractors no longer can compete, lose these larger dollar competitions, or are relegated to a subcontractor role.



Ms. STYLES. In her statement, Dee Lee accurately describes contract consolidation, distinguishes that term from the statutory definition of "contract bundling," and discusses the pros and cons of that contracting approach.

34. Senator COLLINS. Ms. Lee and Ms. Styles, would you also comment on the difference between contract consolidation and contract bundling? What percentages of the contracts awarded in fiscal year 2001 were either bundled or consolidated and what types of products or services did these contracts provide the Department?

Ms. LEE. The key difference between contract consolidation and contract bundling is that requirements on a bundled contract were previously performed by or suitable for award to small businesses, but no longer are likely to be suitable for award to a small business concern as a result of the consolidation.

The Defense Contract Automated Data Collection System began collecting information in fiscal year 2001 on bundled contracts expected to exceed \$5 million. This system collects information on contract actions and dollars obligated, no matter what year the original contract was awarded. Because this was the first year of automated collection, manual corrections were required and edits are now being developed to minimize errors in future reporting. In fiscal year 2001, only 0.2 percent of all contract actions and dollars obligated for the Department were on such bundled contracts. The bundled actions amounted to approximately \$297 million, with an almost even split between hardware purchases and services. The majority of the hardware dollars bundled were for bombs and aircraft accessories or components. The majority of the services dollars bundled were for maintenance or engineering technical services.

The Defense Contract Automated Data Collection System does not identify whether a contract action is consolidated, so we do not have comparable information on consolidated contracts.

Ms. STYLES. In her answer to this question and a previous question, Dee Lee accurately describes contract consolidation and distinguishes that term from the statutory definition of "contract bundling." DOD maintains whatever data is available on DOD's bundled contracts and the types of products or services typically covered by those contracts.

35. Senator COLLINS. Ms. Lee, what types of contracts or services are currently being bundled within the Department of Defense? What types of contracts or services are being consolidated within the Department of Defense, and what process is being used to determine whether a contract should be consolidated or bundled?

Ms. LEE. The majority of the hardware dollars bundled were for bombs and aircraft accessories or components. The majority of the services dollars bundled were for maintenance or engineering technical services. Of these reported actions, 56 percent of the dollars were on fixed-price type contracts with most of these dollars being spent on hardware purchases. The dollars spent on services were largely on other than fixed-price type contracts, and relatively evenly split between cost-type contracts and time and material contracts. The Defense Contract Automated Data Collection System does not identify whether a contract action is consolidated, so we do not have comparable information on consolidated contracts.

DOD follows the process set forth in the Federal Acquisition Regulation to determine whether a bundled contract is necessary and justified. Additionally, the Under Secretary of Defense for Acquisition, Technology, and Logistics has promulgated a Benefit Analysis Guidebook to help DOD personnel determine whether a bundled contract is necessary and justified.

36. Senator COLLINS. Ms. Lee, does the Department have a way to monitor or track the market research and analysis that support the contracting decisions being made today? If so, I would like to see a list of the last 20 contracts that have been consolidated, including a list of the companies affected, and what types of products or services that these contracts will provide the Department.

Ms. LEE. The Department does not have a central repository of market research and analysis supporting contracting decisions, nor do we track such information. Only during occasional management reviews or audits of specific buying commands do we monitor actions, such as market research and analysis, that support contracting decisions. For this reason, we are not able to provide the requested list.

37. Senator COLLINS. Ms. Lee and Ms. Styles, contracting officers today have a lot of discretion in how the purchasing decisions are handled (consolidated vs. separate contracts) in the various agencies, despite the Small Business Reauthorization Act of 1997 (P.L. 105-135). What is the Department of Defense doing to ensure that the contracting officers are consistent with how they apply Section 411 through 413

of the law? What I am trying to understand is whether or not the Department of Defense has it consistent and uniform application of standards to consider consolidation or bundling of contracts.

Ms. LEE. The policy memorandum and the Benefit Analysis Guidebook issued by the Under Secretary of Defense for Acquisition, Technology, and Logistics on January 17, 2002 convey the consistent approach that is expected of acquisition personnel. This, coupled with the guidance of the Federal Acquisition Regulation in implementing the statutory provisions on bundling in the Small Business Act, afford the Department's acquisition personnel with comprehensive and consistent guidance relative to contract consolidation and bundling.

Ms. STYLES. DOD's Benefit Analysis Guidebook contains particularly useful guidance for recognizing and addressing contract bundling issues. Also, as I mentioned in my answer to a previous question, to help implement the President's Small Business Agenda my office is developing a government-wide strategy and recommendations on contract bundling that we plan on presenting to the President this fall.

38. Senator COLLINS. Ms. Styles, Section 822 of the Senate version of the Fiscal Year 2002 National Defense Authorization Bill would have required that prior to consolidation of contract requirements in excess of \$5 million that a determination be made that the benefits of the acquisition strategy, including consolidation requirements, substantially exceed the benefits of alternative contracting approaches that would involve a lesser degree of consolidation. What would the administration's position be on this language, if the language were applied government-wide and replaced the current legislative requirement?

Ms. STYLES. The language that you describe seems to be essentially the legislative approach embodied in S. 2466, the "Small Business Federal Contractor Safeguard Act," a stand-alone bill that would replace current "contract bundling" requirements with statutory provisions covering "contract consolidations" and concomitant market research and justification requirements. The administration does not have a position on S. 2466 at this time. In a few weeks, we plan on presenting to the President our proposed strategy on contract bundling, including recommendations for specific actions that can be taken under the existing statutory framework. Concurrent statutory changes could be confusing to procurement personnel at a time when we plan on asking them to take on more responsibility.

[Whereupon, at 11:40 a.m., the subcommittee adjourned.]

